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ABSTRACT

The content of this bibliography is drawn from a broad range of health and education literature. The sole criterion for inclusion was the applicability of the subject material, directly or indirectly, to clinical education. The literature reflects contemporary trends in education in the health professions: it deals with manpower distribution and maldistribution; it covers the subjects of clinical education, site selection for placement of students, and the development of faculties, curriculum, and clinical programs; it focuses on community health care and the health team concept; it offers much about adult learning and inservice and continuing education; and it includes an exploration of educational evaluation techniques and devices. Subject area divisions are: (1) education for health care delivery; (2) clinical faculty; (3) clinical education process; (4) evaluation; and (5) costs and financing. (Author)

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CLINICAL EDUCATION IN THE HEALTH PROFESSIONS: AN ANNOTATED BIBLIOGRAPHY

Edited by: Margaret L. Moore
Jan F. Perry, and
Ann W. Clark

1976

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CLINICAL EDUCATION IN THE HEALTH PROFESSIONS: AN ANNOTATED BIBLIOGRAPHY

ON CLINICAL EDUCATION SITES, FACULTY DEVELOPMENT, CLINICAL EDUCATION PROCESS, EDUCATIONAL EVALUATION, AND FINANCIAL MATTERS

Edited by Margaret L. Moore, Jan F. Perry, and Ann W. Clark

Assisted by Frank Crowley, Joy A. Hembel, Jean S. Hetherington, and Flora L. Taylor

1976

Developed for the Project on Clinical Education

Sponsored by the Section for Education, American Physical Therapy Association

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PREFACE

The Project on Clinical Education--sponsored by the Section for Education of the American Physical Therapy Association and supported by the United States Department of Health, Education, and Welfare (HEW)--was designed "to develop methodologies for assessing effectiveness of clinical education and establishing guidelines for clinical staff development." This annotated bibliography is one result of the two-year contract.

Those of us associated with the Project and the members of the Executive Council of the Section for Education of the American Physical Therapy Association hope that both this bibliography and its companion piece, the final report fulfilling the contract, will contribute significantly to improving the education of our physical therapy students, who are the primary focus of our efforts.

This annotated bibliography is presented with the hope that it will stimulate and encourage new faculty members and that it will refresh the outlook of our more experienced faculty in physical therapy. The content should be helpful to all educators in the health professions.

Several individuals contributed their considerable talents and much dedicated work and interest to the development of this bibliography. Jan F. Perry and I coordinated and directed the efforts of the readers, Jean S. Hetherington, Joy A. Hembel, and Flora Taylor, who also performed many of the writing duties. A fourth reader, Frank Crowley, participated in the earliest phase of the reading. Ann W. Clark served as both a writer and as editor. The camera-ready copy was prepared with diligence and care by Mary Lou Heimnick and Frances T. Faught.

Our thanks go to the staff of the Division of Associated Health Professions, Health Resources Administration, HEW, for their funds, confidence, and personal support.

Margaret L. Moore, Ed.D.
Project Director (1974-1976)
President, Section for Education (1973-1976)

INTRODUCTION

This annotated bibliography encompasses many education and health related books, articles, pamphlets, and reports which were identified and utilized by participants in the Project on Clinical Education, Section for Education, American Physical Therapy Association, during the course of this two-year federally funded activity (1974-1976) dealing with the clinical education of physical therapy students. It is a planned-for outgrowth and natural by-product of the Project, envisioned at the outset as both a valuable adjunct to the study of clinical education and a separate product to serve a useful purpose of its own. That such a bibliography should be preserved and made available to others was a high priority of the participants in the activity. The full text of the final report of the Project on Clinical Education will be available as a separate document.

The content of this bibliography is not limited to materials pertinent only to the interests of a specialized group of practitioners or educators. The Project was guided always by the realization that an examination of the present and future direction of physical therapy clinical education would necessarily involve information and literature from other health sciences, indeed from the whole field of professional health education, clinical and academic. Consequently the items inventoried here were drawn from a broad range of health and education literature. The sole criterion for inclusion was the applicability of the subject material, directly or indirectly, to clinical education. Any unevenness of representation should be ascribed to the fact that more publishing takes place in some health fields than in others and that many materials which appear as reports of workshops or studies are not retrievable.

The literature annotated here reflects the contemporary trends in education in the health professions; it deals with current manpower distribution and maldistribution; it covers the subjects of clinical education site selection for placement of students, and the development of faculties, curriculums, and clinical programs; it focuses on community health care and the health team concept; it offers much about adult learning and inservice and continuing education; and it includes an exploration of educational evaluation techniques and devices. No effort has been made to offer critical judgments of the various items or their authors, except in occasional instances where comments on the apparent usefulness of a selection are included in an entry.

Reading for the bibliography, as well as the writing, was done by a group of special consultants selected by the Project Director. Their assignment was to produce annotations which would convey to the users of this book factual, condensed reviews of each item. An effort was made to focus on recent contributions to the literature without excluding older valuable source books and hallmark studies with direct bearing or influence on later writings.

The subject area divisions were derived from the requirements in the scope of work of the contract and include: (1) Education for Health Care Delivery, (2) Clinical Faculty, (3) Clinical Education Process, (4) Evaluation, and (5) Costs and Financing. For identification of narrower subject areas there are a few subdivisions.

Entries are numbered consecutively from 1 to 573. Within each section the presentation is by author's name(s), arranged in alphabetical order, with books, articles, pamphlets, and reports not separated. In cases where a selection may be applicable and useful in more than one subject area the annotation appears in the area judged most applicable, then is identified by number at the end of other appropriate topical sections. For books, reports, or monographs authored by two or more persons, the name of each author is included in the index. In the case of multiple authorship of journal articles, the index provides the name of the first author only.

As indicated at the end of several entries a number of annotations were borrowed from Fostering the Growing Need to Learn.[1] We should like to express our appreciation to the American Association of Community and Junior Colleges for permission to reprint annotation number 49, which appeared in Community Colleges and Primary Health Care: Study of Allied Health Education (SAHE) Report.[2]

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[1] Fostering the Growing Need to Learn, U.S. Department of Health, Education, and Welfare, Public Health Service, Division of Regional Medical Programs, Bureau of Health Resources Development, Rockville, Maryland, 1974.

[2] Mary E. Hawthorne and J. Warren Perry, Community Colleges and Primary Health Care: Study of Allied Health Education (SAHE) Report, Washington, D.C., 1974.

Education For Health Care Delivery

EDUCATION FOR HEALTH CARE DELIVERY

Programs, Educational Sites, Curriculums

1.

Allis, John G. "Orientation of Consultant Physical Therapists to Public Health Practice." Physical Therapy, 45 (January, 1965), 57-60.

This article focuses on the new importance of the physical therapist in public health, and the subsequent expansion of the traditional role of the physical therapist to a broader function as consultant, organizer, and administrator in community health programs. The author describes the greater responsibilities which derive from the new role.

Allis surveyed a small group of physical therapists presently active in public health to obtain information which would be helpful in establishing an effective orientation program for other physical therapists entering the field. He was able to identify some of the influences that had motivated the public health physical therapist as well as the academic preparation and experiences they cited as most useful to them. He makes recommendations for physical therapy programs, based on his findings.

2.

American Association of Junior Colleges. Extending Campus Resources: Guide to Using and Selecting Clinical Facilities for Health Technology Programs. Washington, D. C.: American Association of Junior Colleges, 1968, 28 pp.

This booklet was designed to assist college personnel in planning and developing health technology programs. Guidelines and criteria are presented in order to facilitate the task of selecting clinical facilities appropriate to and consistent with the objectives and philosophies of the health technology programs which are being developed.

3.

American Hospital Association. "Statement on Role and Responsibilities of the Hospital in Providing Clinical Facilities for a Collaborative Educational Program in the Health Field." Chicago, Ill.: American Hospital Association, 1967.

In this "Statement" the American Hospital Association discusses the role of the hospital and its governing body in determining the goals and purposes of the institution and specifically in determining whether these goals and purposes will include the use of the hospital's facilities and services for formalized educational purposes. The various determinants of such a decision which are set forth include: the preliminary considerations a hospital's governing body must make; the relationships between the hospital, its staff, and the school; resources which the hospital must have available; the formation of contracts and agreements for the affiliation; and the responsibility which the hospital shares with the educational institution for continuing evaluation of the program.

4.

American Occupational Therapy Association. "Guidelines for Establishment of New Field Work Experience Center," n.d. (Mimeographed.)

This material is available from the AOTA (6000 Executive Blvd., Rockville, Maryland, 20852) for new field work centers for occupational therapy. The guidelines include procedures, protocol, and suggestions for establishing centers.

5.

American Occupational Therapy Association Committee on Basic Professional Education. "Standards and Guidelines for an Occupational Therapy Affiliation Program." American Journal of Occupational Therapy, 25 (September, 1971), 314-16.

The set of guidelines described in this article defines standards to apply to every aspect or activity related to the philosophy, function, and evaluation of the clinical facility. The AOTA Committee on Basic Professional Education warns that in implementing the standards set forth by this committee the director of occupational therapy in the affiliating facility must interpret the standards in accordance with the "Essentials of an Accredited Curriculum in Occupational Therapy and the Standards of Clinical Practice."

6.

American Physical Therapy Association. "Standards for Physical Therapy Services, Adopted by the Board of Directors February 1971." Physical Therapy, 51 (December, 1971), 1315-18.

Carefully enumerated and explicitly worded, the standards encompass a comprehensive set of guidelines for structuring physical therapy services. They provide, initially, for a written statement of purpose and a written organization plan, a qualified director, and a satisfactorily planned and equipped physical plant. These are followed by recommended standards related primarily to the administration of the services, i.e., guidelines for periodic review, fiscal management, individual treatment plans, coordination of physical therapy care with other services, continuing education, and research.

7.

Anderson, N. A.; Corlis, W. L.; Davis, A. E.; Hennessy, W. B.; Latham, M.; Norton, H. G.; Rundle, F. F.; Saxby, H. M.; and Tracy, G. D. "Teaching Health Centres." Medical Journal of Australia, 2 (December 2, 1972), 1312-16.

This paper was formulated by a task group of a teaching and leadership seminar organized by the New South Wales Faculty of the Royal Australian College of General Practitioners which took place February 12-18, 1972. The members report on a concept developed by the task force which relates to the training of students in medicine, nursing, and allied health fields for needed manpower at the community level. It incorporates a plan to establish "teaching health centers," physically and administratively separate entities from associating hospitals. The task group believed that revising curricula to include appropriate training in family and community medicine, followed by vocational training for those electing general practice and family medicine, could supply future community needs. They propose the community health center, allied with a university and teaching center for the general practitioner and family physician. The center they envision would provide teaching-learning experiences for undergraduate students in medicine, community nursing, social work, physiotherapy, and occupational therapy. Emphasis would be on preventative medicine, and the center would strive to promote the acceptance of the team concept in medical care. This report enumerates all of the functions which could be encompassed in the three areas of service, research, and teaching, and provides plans to implement the proposed design.

8.

"Area Health Education Centers in North Carolina." The University of North Carolina at Chapel Hill, July 1, 1973.

This pamphlet, supported in part by the Bureau of Health Manpower Education, National Institutes of Health, describes the AHEC (Area Health Education Centers) program conducted by the University of North Carolina at Chapel Hill, which in 1972 began receiving a five-year $8.5 million grant from the NIH for developing a statewide network of AHECs. AHECs in North Carolina are centered at five community hospitals and are training personnel for 26 counties. Their specific activities center on these five efforts toward better distribution of health manpower: (1) support of physicians currently in practice, (2) training of medical, dental, nursing, pharmacy and public health students in the community hospitals across the state, (3) development of area-wide capability for health manpower training, (4) development of outreach from the community hospital into the geographic area to be served, and (5) development of regional family nurse practitioner training programs.

9.

Aroskar, Mila Ann. "Change Processes Should Involve Baccalaureate Nursing Students." Journal of Nursing Education, 13 (January, 1974), 26-30.

The author recommends more training in baccalaureate nursing programs to prepare nurses to play roles as "change agents." An account is given of a public health nursing course at Villa Maria College, Erie, Pennsylvania, designed to give students background and knowledge about the health agencies in the community--their problems, and their relationship at all levels to the community's health care problems. Students were offered field laboratory experiences with the various agencies and institutions serving the area. From their own observations they could see opportunities for the professional nurse to be instrumental in effecting beneficial change, as well as see the limitations and frustrations that lie in wait for those who work to bring better health care to the community.

10.

Blood, Helen. "Developing Community Health Content in Physical Therapy Curriculum." Physical Therapy, 50 (June, 1970), 1226-38.

This is a review of a program at Stanford University which focused on a commitment made by the faculty to emphasize community health care in the physical therapy curriculum and to evaluate the results. The author describes the curriculum changes which were implemented, as well as the students' clinical experiences and the types of patients they cared for in a public health environment. A post-graduation follow-up study of three participating classes was made to assess the value of the out-of-hospital work experience to determine the degree of carryover of the curriculum content. It was determined that more effort must be made to develop evaluation methodologies and to coordinate the learning experiences physical therapy students receive in different clinical facilities.

11.

Cady, John F., and Anderson, Carl T. "The Preceptorship in Allied Health Education: Short Term Results of a Program to Influence the

Distribution of Allied Health Manpower." Journal of Allied Health, 3 (Winter, 1974), 34-39.

This article reports on a preceptorship sponsored by the School of Health Related Professions and the School of Medicine at the State University of New York at Buffalo in conjunction with the Lakes Area Regional Medical Program. It was hypothesized that the maldistribution of health manpower between metropolitan and rural areas was related to lack of knowledge on the part of the health science students of the possibilities offered in rural practice. Thus, the "immediate objective" of the program was to "give health science students experience in a rural setting which would increase their knowledge of rural health care, to increase the students' awareness of the parameters of rural practice, and to expose health science students to disciplines other than their own in a rural primary care experience." Findings of the study demonstrated that students in allied health have generally negative perceptions of rural practice, that these perceptions differ significantly from those held by physicians currently engaged in rural practice, that after an eight-week preceptorship in a rural setting students' attitudes became more favorable, and that this change in perception was accompanied by an increase in the number of students who intended to practice or would consider the possibility in rural areas. The authors recommended that these results, although preliminary and from a relatively small sample population, warrant serious consideration by schools of allied health.

12.

Clapp, R. W.; Goldman, Charles; and Madison, Donald L. "The Federal Health Agency as Preceptor in Community Medicine." Public Health Reports, 85 (February, 1970), 151-54.

The authors report on the development of a highly desirable 6-week (or longer) preceptorship program offered by the Public Health Service for students in the health professions. The program is designed to expose students to the broader concepts of social medicine, and offers "... a practical, working, field exposure so that a student can determine firsthand the possibilities for pursuing a career in community medicine or health services administration."

13.

"Classifications of Health Care Institutions." Journal of the American Physical Therapy Association, 48 (March, 1968), 247-54.

This article, a special contribution to the journal, attempts the long-needed integration and differentiations of terminology, definitions, and essential characteristics of the numerous and varying health care institutions, general home care institutions, personal care institutions, and sheltered care institutions.

14.

Cloud, Harriet H. "Dietetic Traineeships: IV. Role of the Alabama Dietetic Association in Developing Dietetic Traineeships." Journal of the American Dietetic Association, 64 (May, 1974), 517-19.

The need exists in Alabama for increased traineeships (12-month programs) for graduates in dietetics, as evidenced by the fact that many graduates are not accepted within the state for their internships. The Traineeship Committee of the Alabama Dietetic Association collected data on graduates in need of traineeships and on institutions qualified for training students, sent guidelines to institutions, had "brainstorming" sessions with dieticians about traineeships, and subsequently made "recommendations concerning institutional policies affecting trainees."

15.

Clough, M. H. "Effect of a Clinical Educational Experience in a Rural Virginia Community on Senior Physical Therapy Students' Expressed Interests in Rural Practice." Unpublished master's thesis, Virginia Commonwealth University, 1973.

The results of the clinical education program reviewed by Ms. Clough indicate that no statistically significant change in interest patterns took place in the experimental group of 16 students who participated. The findings support results of other studies which have found that a required preceptorship is not an effective recruiting device for rural practice. Although students working in the rural placement felt they had received a valuable learning experience, and most of them were enthusiastic about their work with the patients, in general there was a negative reaction to rural practice.

16.

Coggeshall, Lowell T. Planning for Medical Progress Through Education. Evanston, Ill.: Association of American Medical Colleges, 1967, 107 pp.

Coggeshall's report for the Association of American Medical Colleges was a hallmark in the field of medical education. Although the subject matter is primarily oriented towards medicine, this work is constantly referred to in publications concerning education for the various medical and allied health fields. The report "briefly outlines the perspective within which American medical education has developed, the major trends related to health care that are now emerging, and their implications for medical education and the work of the association. The report gives specific attention to the past and present roles of the association, and the steps the association should take to channel its future development along the lines that will enable it to provide the positive and effective leadership that the field of medical education will inevitably require in the years and decades immediately ahead."

17.

Connelly, Tom, Jr. "Health Care Process: Teaching Models for Allied Health Students." Journal of Allied Health, 4 (Winter, 1975), 39-45.

The author describes in detail the model for the "Kentucky January" program, the community health care project utilized for training allied health care students at the University of Kentucky. An environment for total health care is a means to teach the scope of generic influences on a community's total health and to provide students the opportunity to understand cooperative health care delivery in the "real world."

Connelly outlines the three interacting subsystems which comprise the model's environment (structural environment, the environment of the patient/recipient, professional environment); the factors affecting the health of the individuals served by the project (physical and social); and the two major factors which define the dimensions of the system (resources and organization).

18.

Corallino, Natale Criss. "Physical Therapy Assistant: The Need, the Standards and the Resources for a Program." Unpublished master's thesis, California State College, 1971.

This master's thesis is a rather unusual attempt to compile statistics and information concerning educational programs for physical therapy assistants. Included in this paper are problems and definitions of items used; a discussion of the need for physical therapy assistant programs; a section of research and findings related to existing physical therapy assistant programs by the author himself; standards for a program (a compilation of known standards and guidelines for physical therapy assistant programs); a resource and reference guide which includes books, journals, periodicals, films, and associations' and miscellaneous publications, which are provided to aid the instructor as well as the student.

19.

Council of Physical Therapy School Directors. Community Health Aspects of Physical Therapy Education. Edited by Nancy Laszlo, Lydia Holley, and Barbara White. Proceedings of the Annual Institute. Chapel Hill, N.C., October 28-November 1, 1968, 127 pp. and Appendix.

This Institute includes a thorough as well as varied discussion on the community aspects of physical therapy education. The lectures and discussions reported emphasize the changing social environment, with its mandate to physical therapy and its educators to recognize and understand these changes, and to become intimately involved in preparing the profession to adapt to them. Of particular note are reports from a number of different schools of physical therapy which have participated in various experimental programs in community health.

20.

Deuschle, Kurt W. "A University's Response to Demands for Care: Community Medicine at Kentucky." Journal of Medical Education, 44 (September, 1969), Special Issue, 755-61.

The University of Kentucky School of Medicine outlined the following objectives for developing graduate medical education to meet community health care needs: (1) The university must be committed to the health care needs of the community. (2) The scientific base in community medicine must be expanded. (3) Academic leadership must be developed further to provide the educational programs and models in community medicine. (4) Community medicine must be directed toward the improvement of the health care system in society.

21.

Dunlop, John T. "Some Facets of the Economics of Health Care Delivery." Journal of Medical Education, 45 (March, 1970), 133-38.

The author, a Harvard professor of political economy, identifies five aspects of present medical arrangements which are open to change: research, financing of care, capital flow, development of paramedical-type personnel, and the delivery system. He says that perhaps ten years from the time at which he was writing there may be a new form of the medical care system in the United States. It is his belief that university leadership must take command of the changes which will and must be made. Dunlop elaborates on some of the changes he sees coming, which include:

--new directions in research, recognizing the interfaces between health, education, housing, transportation, and pollution;
--consideration of a national insurance system;
--possible means of financing new medical facilities;
--development of more paramedical personnel in junior and community colleges with emphasis on cooperation from medical schools; and
--development of more out-of-hospital facilities.

22.

Ellis, Roy G. "Education of Future Health Personnel." Australian Dental Journal, 17 (February, 1972), 70-72.

Ellis' observations, made in an address in Adelaide in October, 1971, focus on the changing scene in health care needs in Canada. His remarks apply to the issues facing health educators everywhere, however, stressing the need for universities to bring the training of allied health personnel in touch with consumer demands and human needs. He commends the contribution being made by experimental programs in community medicine. To provide further new dimensions and meet future requirements in the education of health personnel, he develops a list of the concerns facing university administrators: greater output of primary personnel, better communication among professions, opportunities for interdisciplinary experience, and broader clinical experience, to mention a few. Ellis speaks directly to administrators because he feels that they are the ones who must take the responsibility for expanding university health science centers, so that the centers may function as coordinators and consultants in the delivery of health care.

23.

Estes, E. Harvey. "Medical Education and Medical Care in Underserved Rural Areas." Journal of Medical Education, 48 (December, 1973), 118-20.

This article reports on a system of health care tried out in two small isolated communities in North Carolina. The purpose of the system was the provision of primary care to people whose urgent needs were met by regional hospitals, but whose health needs at the day-to-day level of home nursing, and other out-of-hospital medical concerns were largely unmet. The Department of Community Health Services at Duke University set up a program in which community health workers were recruited from the community itself; the department members studied the community's problems, offered short formal courses to the workers, and began to work with individual patient problems in the community. They found that the patient problems were ones they had expected, but that the community problems were not. From this phase they moved on to a formal program to teach rural health problems. It is designed to be a teaching laboratory in which medical students, nursing students, and an occasional physician's assistant design and work on projects, utilizing the help and approval of a local community health board. The department members have concluded that although all the problems they have confronted are complex, the problems demand solutions--and that medical students and other health students can be a part of the solutions through direct experience. The students have encouraged them to expand the program.

24.

Evans, Robert L.; Pittman, Joseph G.; and Peters, Richard C. "The Community-Based Medical School--Reactions at the Interface Between Medical Education and Medical Care." New England Journal of Medicine, 288 (April 5, 1973), 713-19.

The authors consider the working relationship that a community-based medical school must establish with local practicing physicians in order to gain acceptance and work successfully in the community health care system. They point out the fundamental necessity for medical school faculty to understand and acknowledge the health needs of the community. They stress the importance of developing shared responsibility for the school's policies and procedures and for effectively using the abilities of the community physicians.

25.

Fenderson, Douglas. "Health Manpower Development and Rural Services." Journal of the American Medical Association, 225 (September 24, 1973), 1627-31.

Fenderson reports on three health manpower programs set in motion within a one-year period in 1972-73 directed in large measure to rural health care. The programs, issuing from the Bureau of Health Manpower Education, include: (1) 11 long term contracts negotiated with university health science centers or medical schools for development of area health education centers in 26 different communities; (2) partial support for 39 physician's assistant training projects, and (3) a small program of "Other Manpower Initiatives." Another program, indirectly related to rural health manpower, is a cooperative study by eight recipients of NIH grants to research through computer technology the functions performed by physicians, to determine those functions which could be transferred and performed by other trained personnel.

26.

Funkenstein, Daniel H. "Implications of the Rapid Social Changes in Universities and Medical Schools for the Education of Future Physicians." Journal of Medical Education, 43 (April, 1968), 433-54.

This author recommends that medical education develop divergent curriculums for students electing different areas of study in the medical field. He suggests the following three areas be developed: (1) for scientist-physicians (biologists or physical scientists), (2) for psychiatrists, and (3) for social-scientist-physicians (those who will engage in re-organizing health care delivery and altering human behavior).

27.

Goldstein, Harold M., and Horowitz, Morris A. "Health Manpower Shortage or Surplus." Journal of Allied Health, 3 (Spring, 1974), 93-99.

The authors gathered the material presented in this paper from studies completed by the Center for Medical Manpower Studies at Northwestern University and sponsored by the Manpower Administration, United States Department of Labor. The focus of these studies was upon the utilization of health manpower and the structuring of health occupations. The major assumption was that there is a relative shortage of health manpower. The authors found that the current data appears to support the estimate that a shortage of health workers in the United States still persists, although it is "somewhat contrived." They also project that such a shortage will continue to exist through the 1970's. In conclusion, it is warned that the health system is in a state of rapid change with respect to the kinds of personnel it requires and that "If the trend continues and ambulatory service and extended care facilities continue to expand at the expense of in-hospital patient facilities, adjustments must be made in programs and course openings to accommodate the educational needs of those who are to care for the vertical and aging patient."

28.

Grossman, Judy. "Community Experience for Students." American Journal of Occupational Therapy, 28 (November-December, 1974), 589-91.

The author points out the need for students of occupational therapy to receive training which will enable them to meet the current demands on all personnel in our health care system, i.e., training which will provide leadership and programs for primary prevention and health care at the community level. She suggests curriculum changes in clinical education to require that students perform first in the traditional structured clinical education program for a specified period of time, then participate in an experiential program in a community setting. To illustrate the types of programs she has in mind she describes a field experience program in preventative pediatrics. The structure of this program or any field experience in the community would be designed to allow the student to progress from working under the guidance of a supervisor to working independently as the implementor of his own project.

29.

Grupenhoff, John T., and Strickland, Stephen P., eds. Federal Laws: Health/Environment Manpower. Washington, D. C.: The

Science and Health Communications Group, 1972, 329 pp.

This comprehensive source book deals with health manpower resources and the Federal government's role in insuring adequate numbers of health professionals. The editors and contributors regard the passage of the Comprehensive Health Manpower Training Act of 1971 and the Nurse Training Act of 1971 as climactic points in the last decade's health manpower legislation, and, as the government's first explicit decision to increase the number of physicians. In addition to these two Acts, discussion includes: Federal support for health-manpower development; allied-health and public-health training programs; Veterans Administration health-manpower training, and environmental-manpower training and environmental education. The appendices are nearly 200 pages of basic source documents, including the President's 1971 Message to Congress on Health, reprints of important legislation, and excerpts from Congressional committee reports on pending legislation. (Fostering the Growing Need to Learn)

30.

Hartigan, Joan. "Trends in Nursing Education." Annals of the New York Academy of Sciences, 166 (December 31, 1969), 1045-49.

The author discusses briefly the trends in modern health care which have brought about the "complex and sophisticated armamentarium of equipment, facilities and health personnel constituting one of the major capital outlay items in the national budget (third highest)." In nursing, as in other health professions, this fast-changing scene demands new levels of sophistication and techniques.

This article addresses some of the major issues involved for nursing educators. These will necessarily include: (1) coordinating the professional nurse's role with the several different types of nursing practitioners, (2) designing education programs to provide both bedside nurses and nursing practice leadership, (3) blending the excess of required technical knowledge with a better comprehension of basic principles, (4) striking a balance between the specialization and Gestalt approaches, (5) promoting the development of new technologies along side the traditional, and (6) developing learning experiences and teaching curriculums to encompass the new nursing roles in the community setting.

31.

Hatch, Thomas D. "The Changing Scene in Allied Health Professions Education." Journal of American Dietetic Association, 63 (July, 1973), 15-18.

In a point-by-point survey of the changes and problems in allied health education, the author makes a strong case for removing the educational barriers that divide the health education field and for working cooperatively toward better and more effective academic and clinical training programs. He cites expansion of the allied health fields, emergence of new occupational categories (e.g., physical therapist assistants), costly expansion in internship programs and clinical education, and uneven distribution of manpower. The coordinated efforts of health educators must be directed to these primary concerns, along with the lesser problems of coordinating credentialing, career mobility (utilizing persons already employed and those who are employable), and developing improved equivalency and proficiency testing.

32.

Hawthorne, Mary E., and Perry, J. Warren. Community Colleges and Primary Health Care: Study of Allied Health Education (SAHE) Report. Washington, D. C.: American Association of Community and Junior Colleges, 1974, 293 pp.

The SAHE report was initiated in 1973 at the American Association of Community and Junior Colleges to determine ways and means to make primary and ambulatory care accessible to all Americans. The staff recognized that effective planning would have to take place at all levels of governmental agencies. Further, facilities and manpower must be developed at the community level, and this could be achieved partly through development of the existing community and junior college programs. The study recognizes the need to begin by identifying the existing potential in the United States' allied health and nursing educational system, and by providing colleges already in that system with accurate information and the technical assistance necessary for their full development. The book describes the entire study project and makes recommendations for mounting the sequence of steps to a nationwide collaborative effort. Included is an annotated bibliography containing more than two hundred documents related to allied health and nursing education.

33.

Heap, Mildred F. "The Need for Effective Selection of Personnel in Physical Therapy Departments." Physical Therapy, 49 (January, 1969), 7-14.

The author reports results of a pilot study which was carried out to discover from physical therapy personnel (working at three different levels of job responsibility) whether they considered their physical therapy education adequate preparation for effective performance in their jobs. Based on interviews with 100 physical therapists and supportive staff members, it was apparent that more formal in-depth courses on supervision and administration are needed in programs for physical therapists, on both the undergraduate and graduate levels. Not one physical therapist interviewed had received instruction in formal physical therapy education which he or she considered adequate for effective execution of administrative duties, supervision, interpersonal relations and interdepartmental activities.

34.

Hendee, William R. "A Collaborative Program in Allied Health Training." Journal of Medical Education, 46 (August, 1971), 658-65.

The author describes a model program in radiological technology which has been established in Denver, Colorado, by the Community College of Denver, the University of Colorado School of Medicine, and fourteen Denver hospitals with facilities for diagnostic radiology, radiation therapy, or nuclear medicine. The program, which involves coordinated classroom and clinical training for students who are working for an associate degree in radiotechnology, was designed to help ease the hospitals' increasing inabilities to provide adequate training for radiological technologists as well as fulfill the nation's current need for more well trained technologists. Hendee discusses plans for expansion of this program to selected communities and other areas of specialization together with the proposed development of a "career ladder approach" in which students may discontinue education anywhere along the "career ladder" and later resume it without penalty.

35.

Holder, Lee. "Delivery of Health Care: Implications for Allied Health Educators." Journal of Allied Health, 2 (Spring, 1973), 68-75.

This article deals with the broad subject of health care delivery, exploring the major aspects of its implications for allied health educators. The author organized three subject areas which demand attention: designing the system for delivery of health care; determining the roles of the health personnel to provide the manpower; and formulating the programs which will work effectively to train health teams to deliver improved care.

36.

Holley, Lydia S. "A Component of Physical Therapy Education." Physical Therapy, 44 (January, 1964), 23-25.

Ms. Holley describes two facets of public health: public health as a philosophy and public health as a specialized field of health practice. The one major area which the author believes incorporates both of these concepts, and is the final consideration in surveying the public health content in physical therapy curriculums, involves the broad consideration of medical care today and the trends in medical care for the immediate future. These considerations are discussed.

37.

Jonas, Steven. "Some Thoughts on Primary Care: Problems in Implementation." International Journal of Health Services, 3 (Spring, 1973), 177-87.

This paper touches upon "definitions of primary care, the dimensions of the health care crisis in general and of the primary care crisis in particular, the importance of team practice in primary care, the necessity of creating the social physician as team leader, and some changes, administrative, fiscal and philosophical, which appear to be necessary in medical education in order to begin moving to solve the primary care crisis." Emphasis is on ambulatory care service and educating the physician to act as head of the health care team.

38.

Kirschbaum, Thomas H. "An Experiment in Medical Education." American Journal of Obstetrics and Gynecology, 119 (June 1, 1974), 320-27.

Kirschbaum traces the development of some of the recent trends in medical education pertinent to his primary interest (in this article) which is a program at Michigan State University College of Human Medicine designed to effect an alignment of medical school growth with the interests and assets of the community. The program outline incorporates two years of traditional scientific preparation, with emphasis on the student as self-educator, early patient contact, and the need to evaluate health care effectiveness. The first two years are followed by clinical clerkships in four different cities in central Michigan, involving twelve hospitals which participate in five residency programs. The author describes the organization of the program, the role of the community physicians, the role of the medical school faculty, and the rewards for students and communities.

39.

Knowles, John H., ed. The Teaching Hospital. Cambridge, Mass.: Harvard University Press, 1966, 152 pp.

Knowles's book addresses the broad subject of the university-affiliated teaching hospital, with attention to the areas of teaching and providing quality patient care--determining the function, role, and financing of these two primary activities, and above all, coming to grips with the responsibility of the medical school and teaching hospital to a cost- and service-conscious public. The book consists of four lectures by different authors. The last one, entitled "Medical School, Teaching Hospital, and Social Responsibility," by the editor, contains a forward-thinking approach to the need for regional planning in medical education, and Knowles furnishes a pertinent discussion of the central role the university must play.

40.

Levine, David M, and Bonito, Arthur J. "Impact of Clinical Training on Attitudes of Medical Students: Self-Perpetuating Barrier to Change in the System?" British Journal of Medical Education, 8 (March, 1974), 13-16.

This study relates to the increasing pressure for changes in the delivery of medical care and how doctors' attitudes will affect the success of any changes. In an effort to determine how physicians may be more favorably influenced toward change the authors consider when and how their attitudes toward change are formed. At the Johns Hopkins School of Medicine a self-administered questionnaire was used to survey a total of 741 respondents: 363 students and 378 physician-teachers. Ten Likert-type statements were used with which the respondents could indicate agreement or disagreement of varying degree. Two propositions were tested: (1) that systematic variations in doctors' attitudes toward changes in the economic and administrative organization of medical practice can be demonstrated related to dimensions of their professional behavior (i.e., their current and future activities, their specialties); (2) that the start of the medical student's clinical training is a turning point in the educational process, beyond which the student doctor's attitudes toward changes in the organization of medical practice are identical with those of the staff group whose professional involvement is the same as that aspired to by the student. Results showed that both propositions can be supported (but the second one only partially). The implications for change are ominous, for clinical education would seem to be producing professionals whose expectations will match existing attitudes in the medical profession, which are incongruous with the anticipated changes in medical practice.

41.

Levit, Edithe J.; Schumacher, Charles F.; and Hubbard, John P. "The Effect of Characteristics of Hospitals in Relation to the Caliber of Interns Obtained and the Competence of Interns After One Year of Training." Journal of Medical Education, 38 (November, 1963), 909-19.

Twenty-four hundred (2,400) National Board candidates in 321 hospitals were surveyed for this study. The measure of the caliber of interns at the beginning of their internships was based on National Board scores on Part II (by those who took it as they graduated from medical school), and the measure at the end of the internship was based on Part III scores of the same individuals. The effects of six hospital characteristics were considered: (1) medical school affiliation, (2) straight vs. rotating internship programs, (3) hospital size, (4) administrative control, (5) internship stipend, (6) percentage of internships filled. The authors report in full on their findings. In part, and with certain limitations, the evidence indicates that hospitals having a major teaching affiliation with a medical school obtain interns of significantly higher caliber and that interns in affiliated hospitals score significantly higher on Part III than interns in non-affiliated hospitals.

42.

Light, Israel, and Frey, Don C. "Education and the Hospital: Dual Responsibility for Allied Manpower Training." Hospitals, 47 (March 1, 1973), 85-88.

In this article, the authors identify problems in the education and training of allied health personnel. They concentrate on the unwillingness of educational institutions to commit any more of their undergraduate programs to occupational orientation than is absolutely necessary, while hospitals seem equally unwilling to recognize the need for more sophisticated background on the part of many of their employees. After identifying problems in this area, the author recommends working relationships so that educational institutions and clinical facilities will come to realize "that to produce the numbers and kinds of allied health personnel required to deliver competent health care and services to the nation's population, they must consider themselves as integral partners and must share human expertise, physical plants, financial costs, and all other resources necessary to do the job."

43.

Lysaught, Jerome P. An Abstract for Action. New York: McGraw-Hill Book Co., 1970, 167 pp.

This is the report of a two-and-one-half-year study begun in 1967 by the National Commission on Nursing and Nursing Education to examine the changing practices and educational patterns in nursing today and the probable requirements in professional nursing over the next several decades. Some significant recommendations include: (1) that nurses be directly involved in health-manpower planning at all governmental and regional levels; (2) that promotion be granted on the basis of acquisition of knowledge and demonstrated competence in performance; (3) that health administrators promote excellence in nursing practice by providing sufficient staff, by discharging appropriate nursing functions, and by evaluating the nursing plan for care; (4) that local health-care facilities adopt continuing education programs and flexible employment policies; (5) that institutions for nursing education provide licensed practical nurses with career ladders leading to academic degrees and registered licensure; and (6) that all state licensure laws for nursing be revised to require periodic review of the individual's qualifications as a condition for licensure renewal. (Fostering the Growing Need to Learn)

44.

Madison, Donald. "The Student Health Project: A New Approach to Education in Community Medicine." Milbank Memorial Fund Quarterly, 46 (July, 1968), 389-408.

The "new approach" at the time this author was writing was the Student Health Project, designed to spotlight the deprived community and the absence, rather than presence, of the ideal model of medical care. Instead of placing clinical students in a community with well-organized, properly functioning, exemplary health services, this project attaches pre-clinical students in the health professions to community agencies in which the students can see clearly the failure of existing services to meet the needs of patients. Their assignment is to identify deficiencies and work toward improvements, giving direct assistance to patients by guiding them through the labyrinth of available health and welfare services. An example of this concept of approaching community medicine is the South Bronx (New York) project. The author provides a detailed overview of the Bronx project and states that Student Health Projects should have a place in future planning.

45.

McTernan, Edmund J., and Hawkins, Robert O., Jr., eds. Educating Personnel for the Allied Health Professions and Services. St. Louis, Mo.: The C.V. Mosby Company, 1972, 224 pp.

Especially interesting in this book are the chapters by Pascasio, Young, Atwell, and Boatman. Pascasio's chapter deals with the selection, evaluation, and utilization of clinical resources, stressing that these resources should be viewed for their value in initial learning, reinforced or continued learning, as well as for their contributions to the internship portion of the curriculum. The chapter by Young discusses ways to recruit, utilize, and retain manpower, while Atwell's chapter concentrates on faculty development--both the improvement of existing faculty and the development of new faculty. Ralph Boatman comments upon continuing education, systematically considering the elements of a short-term continuing education program, and presents a model for administering continuing education.

46.

Moore, Margaret L. "Interinstitutional Agreements for Clinical Education in Physical Therapy." Unpublished Ed.D. dissertation, Duke University, 1971, 195 pp.

Through a review of the literature, an analysis of a questionnaire which surveyed educational administrators, and opinions developed at a workshop sponsored by supervisors and clinical faculty at the University of North Carolina Division of Physical Therapy, Dr. Moore explored the need for written agreements or contracts between the university and its clinical centers. Her dissertation, based on substantial evidence that such a need does exist, was written to recommend the form in which an agreement should be drafted and to present guidelines for developing interinstitutional contracts governing physical therapy clinical education.

47.

Moore, Margaret L., and Parker, Mabel M. "Experience with Written Agreements for Clinical Education." Proceedings of the World Confederation for Physical Therapy, Seventh International Congress, Montreal, Canada, June 1974. London: World Confederation for Physical Therapy, pp. 67-73.

This paper is a report of a follow-up study on the experiences of clinical and university educators in physical therapy from 1970 to 1973 in developing written agreements with clinical centers. (The original study is reported in Form and Function of Written Agreements in the Clinical Education of Health Professionals, published in 1972, by Moore, Parker, and Nourse.) Results of the study indicated that the development of written agreements has proved to be time-consuming but well worth the effort. Both groups of respondents felt that entering into contracts had resulted in clearer understanding, assisted in identifying additional resources, and improved the working relationship between the clinical faculty and the university.

48.

Moore, Margaret L., and Parker, Mabel M. "Public Health in Physical Therapy Education." Journal of the American Physical Therapy Association, 42 (September, 1962),570-73.

The authors, who urge public health content in curriculum for physical therapy students, describe the program designed for student physical therapists at The University of North Carolina at Chapel Hill. The public health clinical and experiential aspects of the Chapel Hill program include the following: participation in home care services; participation in patient referral-planning for follow-up assistance, write-up and preparation of home instruction, following patient progress; and affiliation with physical therapists on the State Board of Health. Important benefits derived by the students from these activities and associations are summarized, and the skills required of the physical therapy students serving in public health programs are defined.

49.

Moore, Margaret L.; Parker, Mabel M.; and Nourse, E. Shepley. Form and Function of Written Agreements in the Clinical Education of Health Professionals. Thorofare, N.J.: Charles B. Slack, Inc., 1972, 81 pp.

This book reports the outcomes of a workshop in interinstitutional agreements in which a nationally selected group of physical therapy and other health professionals participated. Its focus is on the three parties involved in clinical education, namely, students, clinical educators, and institutional educators; it emphasizes the fact that affiliation agreements should be jointly developed by the parties concerned and that agreements should be documented in writing. Results of the workshop interactions are described in detail and translated into useful guidelines, including the profile of a contract. Useful for all allied health educators, but especially important to those involved directly in clinical education. (Community Colleges and Primary Health Care: Study of Allied Health Education (SAHE) Report)

50.

Murphee, Alice H.; Banks, Sam A.; and Reynolds, Richard C. "The Community Health Clerkship: Profile of a Program." Journal of Medical Education, 47 (December, 1972), 925-30.

This is a description of a program at the University of Florida College of Medicine designed to provide student experiences in community settings. For a five-week period of clinical rotation the medical student is offered a program in which he practices in areas of his own choice--ghetto or city hospital, rural setting, student health center, mental health hospital, or other logistic choices available to the program, or he may elect to serve a preceptorship or externship with a family physician. Such a program constitutes a clerkship, which has broad objectives for increasing the student's awareness of community nonmedical resources, for developing his sensitivity to the influence of social factors on his patients, and for illustrating other variables affecting health care delivery.

The authors present an account of the problems of administering the program, and an evaluation of the results. They conclude that despite problems "a deliberately flexible approach has been achieved and should continue in a learning experience providing necessary new dimensions in medical education."

51.

Musser, Marc J. "A Public-Private Consortium: Health Care Delivery." Hospitals, 47 (August 16, 1973), 35-37.

Musser suggests that the solution to our health care delivery problems can be found if we coordinate efforts of the federal and state governments with those of the private sector. He cites specific examples of working relationships developed successfully at the community level between the Veterans Administration health care system and facilities and services already existing in the community. Other examples of the efforts made by the VA describe instances in which VA hospital resources and facilities have been made available for medical training programs, and for use by communities which lack their own facilities.

52.

National Health Council and American Association of Junior Colleges. A Guide for Health Technology Program Planning. National Health Council, New York, and American Association of Junior Colleges, Washington, D. C., 52 pp.

This publication presents a guide to the building of strong programs in health technology "within two-year collegiate institutions through the collaboration of junior colleges with health practitioner associations and community health facilities." After stating a number of assumptions made in drawing together its program guidelines, the Guide presents a fairly thorough step-by-step program planning cycle. A section is included which discusses what the health facility administrator and the health practitioner should know about the two-year college and its programs. Checklists of the "role performances" with which health facilities and health practitioner associations supporting health technology programs should be familiar are also given.

53.

National League for Nursing. The Changing Role of the Hospital and Implication for Nursing Education. New York: National League for Nursing, 1974, 48 pp. (Publication No. 16-1551.)

This pamphlet includes a series of papers which were presented at the Annual Meeting of the Council of Diploma Programs held at Kansas City, Missouri, May 1-3, 1974. The papers which directly address nursing education deal with implications of the changing hospital for the nurse's expanding role, for continuing education and self-education for nursing faculties, and for program and curriculum planning. The Council also heard a paper on nursing judgments and their moral and legal implications. The participants focused in the main on specific schools and their individual problems.

54.

National League for Nursing. Guidelines for Assessing the Nursing Education Needs of a Community. New York: National League for Nursing, 1968, 11 pp. (Publication No. 11-1245.)

These guidelines provide information for potential policy makers or program developers of nursing education at the community level. They are presented in a question and answer format, dealing with such basic questions as "Where is the study to be made?", "Who will undertake the study?" and "What is to be studied--in the community, and in nursing education?"

55.

National League for Nursing, Council of Baccalaureate and Higher Degree Programs. "Arrangements Between an Institution of Higher Education and Agencies Which Provide Learning Laboratories for Nursing Education." New York: National League for Nursing, 1973, 8 pp.

This is a comprehensive guide to joint planning between the college of nursing and the outside health agencies with which the college arranges for student nurses' laboratory experience. It spells out in well-defined terms the roles and responsibilities of the academic faculty and the staff of the affiliating agency. Cooperative planning, mutual respect and agreement on common purpose, to provide the best possible nursing care, are stressed as the foundations upon which all policies and practices must rest.

56.

Parrish, Henry M. "A Critique of the Hardin Committee Report on Health Sciences Education in South Dakota." South Dakota Journal of Medicine, 24 (November, 1971), 29-34.

The author favorably critiques the report of the committee which compiled information about the problems of health science education in the state and the distribution of manpower. A critical factor pointed out by the committee and discussed by the author reiterates the need to keep students in the state for their clinical education, as too great a number who leave for internships, residencies (or even the third and fourth years of medical school) do not return to the state.

57.

Pascasio, Anne. "Crystal Ball Gazing: Let's Look Ahead Together." Physical Therapy, 49 (January, 1969), 15-18.

What should a physical therapist of the future be able to do? Traditionally, physical therapists have been clinicians in hospitals. However, new (1969) trends already indicate that the number of in-hospital physical therapists will decrease as therapists respond to the demand for physical therapy services in out-patient centers, home care agencies, and out-of-hospital situations. The field of physical therapy will need researchers and educators in treatment areas and in physical therapy education. Curriculums will have to educate physical therapists to fulfill the needs of society, and the new findings of the profession. The individual physical therapist will need to become an effective teacher of patients, physical therapist assistants, and aides.

58.

Pellegrino, Edmund D. "Regionalization: An Integrated Effort of Medical School, Community and Practicing Physician." Bulletin of the New York Academy of Medicine, 42 (December, 1966), 1193-1200.

The author discusses the profound transformation of medical care in the United States, induced by the awakening of universities to their role in public service and community action and the public's decision to establish health as a major social goal. Contributing to the transformation is the increasingly widespread belief that the maximum of new knowledge must be brought to bear for each patient, in his own community and, if possible, independent of his social status or ability to pay. The author believes, however, that achievement of these goals will be impossible without an integrated effort by teachers, investigators, and the community of practicing physicians to develop a "Regional Concept" which would integrate the practicing elements with the regional and investigative elements in the medical care system. The author feels immediate steps must be taken to reach these goals, and he presents a number of suggested long-term activities.

59.

Phillips, Donald F. "Laboratory for Medical Education." Hospitals, 47 (March 1, 1973), 77-82.

The program of medical education described in this article is offered at a new public medical school which is one of the six schools comprising the Health Science Center of the State University of New York at Stony Brook. Dr. Edmund D. Pellegrino, the University's dean for health services, instituted an innovative system of medical education committed to (1) the fullest development of interaction with the community, (2) the design and operation of new models of patient care to offer the best possible care to every patient in the community, and (3) a less rigid and traditional curriculum geared to student needs and interests and more consonant with the principles of graduate education. He structured the curriculum around a core design to teach two "languages": a) basic sciences, b) clinical. The characteristics of the curriculum include: a high degree of flexibility with multiple pathways to the MD degree, a common core of basic clinical science, extended experiences in the community and in independent research, early patient contact, and study in relevant disciplines such as sociology, psychology, anthropology, engineering. The concepts Dr. Pellegrino embraces and the design for his program are fully described.

60.

Phillips, Donald F. "Reaching Out to Rural Communities." Hospitals, 46 (June 1, 1972), 53-57.

This article was based upon the proceedings of a Conference on Hospitals and Rural Health Services held at the American Hospital Association headquarters, December 14-16, 1971, "to sensitize hospitals to the need to become involved in planning the necessary elements of health services in rural areas and to identify changes in the hospital's role." The topics under discussion included finding a definition for the term "rural", an effort which produced little agreement, as pure numerical definitions are deceptive and other definitions prove nebulous. More fruitful discussion took place on the subjects of the role of the hospital as a social agency, physician shortages, university involvement, paramedical personnel, rural mental health, and health maintenance organizations.

The author reviews a number of programs operating in different health education centers designed to provide health services in rural communities. He describes continuing efforts to recruit physicians for rural practice, problems and obstacles of attracting students to rural communities, and at least two examples of programs producing measurable success.

61.

Phillips, Theodore, and Swanson, August G. "Teaching Family Medicine in Rural Clinical Clerkships." Journal of American Medical Association, 228 (June 10, 1974), 1409-10.

The six-week clerkships described in this article were used for instruction of undergraduate medical students in family medicine at the University of Washington School of Medicine. The clerkships demonstrated to the developers that selected family physicians excel at teaching management of common clinical problems, doctor-patient interaction, use of community resources, perception of the demands made by a patient's environment, and practice management.

The authors reviewed the findings after the clerkship program had operated for three years. They found that 64 percent of those who participated were pursuing family practice training or were in rural general practice. Seventeen percent (17%) were in "other primary care" training; 8 percent were in specialties; and 10 percent were undecided or their choices were unknown.

62.

Physical Therapy Clinical Faculty Institute. Community Health Aspects of Physical Therapy. Edited by Adelaide L. McGarrett and Kathryn Shaffer. Proceedings of the 1971 Physical Therapy Clinical Faculty Institute at Boston-Bouvé College of Allied Health Professions, Boston University, 65 pp.

The Physical Therapy Clinical Faculty Institute surveyed the role and function of the physical therapist in community health programs and addressed the problem of shortages, in both programs and manpower. Emphasis was placed on the need for developing community health experiences in clinical education to prepare physical therapists to perform rehabilitation services in the home setting and in the various kinds of out-of-hospital facilities. These proceedings include a set of guidelines developed by the participants for discussion of the preparation of physical therapists for their expanding roles.

63.

Rode, Edward A. "Shared Training Becomes a Reality." Hospitals, 47 (March 1, 1973), 149-55 passim.

The author describes the disparities found in the nursing assistants training programs surveyed in 22 hospitals in the Kansas City, Missouri, area. In an effort to develop a shared program for training nursing assistants the board of the Kansas City Area Hospital Association (composed of 36 member hospitals) charged a task force from their association to coordinate hospitals, schools, and other agencies to produce a single training program acceptable to all hospitals and offering uniform training to all students. The article describes in detail the composition of the task force, the progress of its work, and the program that evolved. The advantages of the program were evident to hospitals and students. Students were assured that their training was acceptable at all hospitals and in 14 months the nine participating hospitals reported a total saving of $100,000 as they decreased staff turnover and utilized the students in the training program.

64.

Schiller, Sister Rosita. "II. Exploring the Feasibility and Planning Traineeships in Michigan." Journal of the American Dietetic Association, 64 (May, 1974), 512-14.

This article reports on an ADA (American Dietetics Association) traineeship program in Michigan which came about as a result of a conference at Michigan State University to: (1) explore the traineeship as an alternate pathway to becoming a professionally qualified dietitian (the traineeship, unlike the traditional two-year internship experience, is concentrated into one year), (2) assist in identifying interested dietitians within the state who have the potential for providing approved dietetic traineeship programs, and (3) familiarize dietetic seniors graduating in 1973 in Michigan with this alternate pathway.

The author lists "ten commandments" she distilled from the guidelines for planning traineeships which were developed by speakers at the conference, and describes specific plans and programs in the Michigan traineeships.

65.

Scott, Geraldine L., and Robbins, Sandra T. "III. A Dietetic Traineeship by Consortium Effort." Journal of the American Dietetic Association, 64 (May, 1974), 515-17.

This article describes the development and structure of an unfunded, twelve-month dietetic traineeship sponsored by a consortium of five sponsoring hospitals and nine affiliating institutions. "The unique feature of this consortium is its metropolitan area health facility base with a binding structure of governing documents. The educational plan and organizational structure are reviewed against the backdrop of the financial considerations of training in today's tight money market."

66.

Seivwright, Mary Jane. "The Expectations of Baccalaureate Nursing Students Concerning Their Clinical Experiences in Public Health Nursing." Unpublished Ph.D. dissertation, Teachers College, Columbia University, New York, 1968.

This is a review of the literature relating to the theory that students who receive some of their training in field placement areas about which they have held preconceived negative assumptions can be influenced to alter their thinking and to select those areas for service after graduation. Ms. Seivwright cites the study of seven New York baccalaureate nursing programs which documented students' negative attitudes toward nursing and caring for the chronically ill and the aged. She is concerned that nursing education is guilty of "curricular unreality"--that the need is clear in the schools for more acknowledgment of the relationship between attitudinal problems of the students and insufficient health care delivery for large numbers of patients.

> "It seems almost unbelievable that in an age when the trend is toward care of a larger number of persons, including the chronically ill, in their homes or other-than-hospital facilities, most nursing students still receive the largest proportion of their training in hospitals caring for the acutely ill."

Her conclusion is that if the manpower needs of the health professions are to be met the schools must change their curriculums (theoretical content and selection of learning activities) in order to exert a more positive influence on students' attitudes toward all fields of health service.

67.

Shepard, Katherine F. "Family Focus." American Journal of Public Health, 65 (January, 1975), 63-65.

"Family Focus" describes an educational-service-research program developed in 1971 by the Division of Physical Therapy, Stanford University School of Medicine, in cooperation with the Mental Research Institute, Palo Alto, California. The program is designed "to provide a transitional health care experience for patients in an acute care hospital." The Family Focus program has enabled the Division of Physical Therapy to expand the social science aspect of the curriculum for master's degree students in physical therapy, with the primary objective of developing "increased awareness of and ability to work with the patient in the behavioral-social context of his family and culture." An on-site "home" acts as the teaching laboratory, as students learn how to observe interpersonal relationships in the family, how to work effectively in the framework of the family's established coping behaviors, and how to deal with cultural communication barriers.

68.

Sheps, Cecil G.; Clark, Dean A.; Gerdes, John W.; Halpern, Ethelmarie; and Hershey, Nathan. Medical Schools and Hospitals: Interdependence for Education and Service. Journal of Medical Education, 40 (September, 1965), Part 2, 169 pp.

This monograph is the report of a national study of affiliations between medical schools and hospitals, conducted by members of the faculty of the Program in Medical Hospital Administration and the Health Law Center of the graduate School of Public Health, University of Pittsburgh, at the suggestion of the Association of American Medical Colleges. The attention of this study was focused upon medical education in terms of the medical student, since this is the portion of education for which the medical school has full responsibility and over which it exercises most control. The continuous and rapid development and expansion of medical schools (new and already existing), the authors felt, emphasizes the continuing need for sound affiliations between medical schools and hospitals as a basis for satisfactory medical education. Throughout the book the authors discuss eight essential elements to consider in the school-hospital affiliation: (1) shared goals, (2) faculty and hospital staff appointments, (3) patients and teaching, (4) medical students and patients, (5) interns and residents, (6) patient care, (7) research, and (8) affiliation agreements.

69.

Smith, E. Brooks. "Needed: A New Order in Student Teaching That Brings Joint Accountability for Professional Development." Journal of Teacher Education, 20 (Spring, 1969), 27-36.

First describing the advantages of "Cooperative Clinical Teaching Centers for Programs of Teacher Preparation and Instructional Improvement in the Cities" and advocating team teaching, Smith proceeds to a list of the essentials involved in the "School-University Collaboration." The author stresses that to effect collaboration, contributions of time, staff, and money must be equally divided between the university and the clinical teaching center, and suggests that a joint steering committee (composed of equal numbers from both institutions) set policy, develop plans, and review activities of the program.

70.

Smythe, Cheeves McC.; Kinney, Thomas D.; and Littlemeyer, Mary H. "The Role of the University in Graduate Medical Education." Proceedings of the Conference Council of Academic Societies. Journal of Medical Education, 44 (September, 1969), Special Issue, 723-906.

The Council of Academic Societies, addressing its own members and the Association of American Medical Colleges, reports on the changes, both required and recommended, that are essential to the successful training of future physicians in our changing society. The conviction that the present system of medical education is not flexible enough was foremost among their imperatives for change. In the pages containing "Summary and Conclusions" (850-54) the authors describe our country's rapidly changing ideas about medical care and the ways in which the universities must broaden the training of medical graduates so that future physicians will be able to provide advice and expertise in planning and implementing health care in communities, in new and different ways.

71.

Southern Regional Education Board. Expanding Opportunity Through Sharing Faculty Resources. Institute for Higher Educational Opportunity, Southern Regional Education Board, 1975, 21pp.

This pamphlet presents materials developed from discussions held between Southern Regional Education Board staff members and administrators and faculty from colleges and universities located in areas where steps have been taken to initiate joint planning programs in higher education. Materials from these discussions are presented under four major headings: the potential benefits which may result from interinstitutional utilization of faculty resources; barriers to achieving cooperative programs; types of arrangements which may be developed between institutions; and suggestions for planning procedures.

72.

University of North Carolina at Chapel Hill, Division of Physical Therapy. The Role of the Physical Therapist and the Training Needs of Those Working in Pediatric Programs. Report of Special Project No. 465, Division of Physical Therapy, School of Medicine, University of North Carolina at Chapel Hill, supported by Maternal and Child Health Service, Health Services and Mental Health Administration, Public Health Service, Department of Health, Education, and Welfare, June 1969 to July 1970, 54 pp.

The purpose of this project, which was planned by the members of the Pediatric Teaching Committee of the Division of Physical Therapy at the University of North Carolina at Chapel Hill was to "determine the role of physical therapy in pediatrics and the training needs of physical therapists involved in pediatric programs." Four objectives were identified as a means of attaining this goal including: the determination of the present role of physical therapy in pediatric programs, the determination of the present needs of physical therapists working in pediatrics, the determination of the future role and needs of physical therapists in pediatrics, and finally, the intention of making this project available to others. "This report reflects the views relative to roles and needs, of a representative cross section of physical therapists working in pediatric settings throughout the United States."

73.

University of North Carolina at Chapel Hill, Health Services Research Center. "Nursing Student Utilization of Clinical Experience Settings in North Carolina." Sponsored by the General Administration, The University of North Carolina. Prepared by the Health Services Research Center, The University of North Carolina at Chapel Hill in cooperation with The University of North Carolina Area Health Education Centers Program, February, 1975.

This report presents data obtained from an analysis of questionnaires completed by the deans of every school of nursing in North Carolina and an analysis of responses to questionnaires mailed to the administrators (or directors of nursing) of every hospital, health department, and nursing home in the state. "The purpose of this study is to help identify the utilization and projected utilization of clinical facilities by nursing students as settings in which these students obtain their clinical experience."

74.

The University of the State of New York, The State Education Department. Guide to Selection of Clinical Facilities for an Associate Degree Nursing Program. Albany, New York: The State Education Department, 1966, 27 pp.

This well-organized guide was developed as an aid to college personnel in selecting appropriate educational settings for nursing students. It was felt that the guide would also help agency officials to understand the type and quality of clinical facilities that can best serve student needs. The guide includes a section describing the actual criteria recommended for such programs, as well as a checklist for survey and evaluation of a facility for the use of college personnel. The checklist includes the Institution's A. General Attitudes; B. Attitude Toward Patients; C. Attitudes Toward Nurses; D. Clinical Facilities; E. Equipment and Supplies; F. Records; G. Staffing Pattern; H. Duality of Nursing Care; I. Hospital and Medical Organization; J. Auxiliary Services; and K. Summary.

75.

"University of Washington Faculty Endorses WAMI Program; States Take Over Costs." Association of American Medical Colleges Education News, 2, June, 1975.

This article briefly describes a program begun five years ago in Washington, Alaska, Montana, and Idaho, which takes its name (WAMI) from the initials of these four states. There is only one medical school to serve all four states, the one at the University of Washington in Seattle (though some students take part of their basic science requirements at a local university). The WAMI program requires that students from the four states take at least one six-week clerkship at one of fourteen Community Clinical Units in remote areas, in the hope that these students will return to their home states to practice. The federal government is subsidizing the clinical costs for the program, which has been well accepted due to its heavy emphasis on evaluation. This article enumerates six long-range evaluative goals of the "Community Phase" of clinical training and describes some of the current characteristics of the program. Students have responded favorably to the high faculty-student ratio and to the opportunity to see a large number of patients.

76.

U. S. Department of Health, Education, and Welfare,Public Health Service, Health Resources Administration. Area Health Education Centers. Washington, D.C.: Government Printing Office, May, 1973. (DHEW Publication No. (NIH) 73-548.)

This publication was prepared to provide information on AHEC (Area Health Education Centers) activities and projects. The Comprehensive Health Manpower Training Act of 1971 authorized the development of the AHEC system, an arrangement that links health service organizations and educational institutions in a way that serves both student and surrounding community. Under AHEC arrangements students from participating schools and health occupations training programs receive some of their training in clinical settings afforded by participating hospitals and other health care facilities. In this way the program provides both training opportunities and health care capability.

This pamphlet describes the structure of AHECs and the programs offered, provides information regarding eligibility requirements for applicants, and traces the development of the existing AHECs at the time this was published.

77.

Verby, John; Lenarz, Gene; and Garrard, Judy. "Evaluation of an Alternative Clinical Experience: The Minnesota Rural Physician Associate Program." Journal of Medical Education, 49 (July, 1974), 696-98.

The authors describe a University of Minnesota Medical School program designed to give third-year medical students an option of spending 12 months with a primary care physician in a rural community in lieu of the regular third-year clerkship rotations. Students' progress in the program was evaluated at regular intervals by a variety of devices, including the students' own written critiques of the program and two evaluations in which the students were measured against a control group in the regular curriculum. There were no significant differences between the two groups of students revealed by results of their examinations. Students felt that the program accelerated their personal growth, resulted in increased appreciation of the economics of health and disease, and gave them better insight into the operation of both a hospital and a medical office. The students' preceptors evaluated the program favorably.

78.

Voorabchi, Bahman; Olson, Carl J.; and Page, Gordon G. "Relationship Between Type of Pediatric Clerkship and Performance on Pediatric Examinations." Journal of Medical Education, 48 (April, 1973), 356-65.

This reports on a comparison of the performance of three groups of medical students (at the University of Illinois) who were assigned to three different hospital settings for their pediatric clerkships. The purpose of the study was to measure the effect of the setting on the students. The settings included university, county and private hospitals, where the clerkships differed significantly in the number and type of patients seen, the proportion of time spent in various departments, and the number of lectures and rounds scheduled. Carefully prepared pediatric examinations revealed no differences in the performance of the groups from the three different hospitals. A second test was undertaken, however, which showed that students who had taken a pediatric elective scored significantly higher than the others. This suggests the importance to program planners of considering more opportunities for self-initiated learning. In addition, the implication for graduating medical students is that they need not insist on a particular type of hospital training for clerkships.

79.

Warren, Michael D. "The Training of Undergraduates in the Public Health Approach." Public Health, 79 (May, 1965), 198-207.

This British author, writing a decade ago, discusses the difficulty in teaching medical students to think "preventively" and "socially", and prescribes the subjects that must necessarily be included in the training of undergraduates in the public health approach. He lists courses which should be taught in both the pre-clinical and clinical years, the various methods of teaching which can be employed, and concludes that it is necessary for each teaching hospital to assume some responsibility for the health and medical problems in its own location. He assigns the responsibility for designing public health programs to the heads of the departments of preventive and social medicine.

80.

Wechsler, Henry. "Shortages in Dental Manpower: A Problem of Maldistribution." Journal of Dental Education, 36 (January, 1972), 77-83.

Wechsler describes the social changes underlying the spiraling demand for nationwide quality dental care and adequate dental manpower. He cites a New York State Manpower Survey he had recently completed which confirms other studies showing that future dental students, like medical students, will have to be recruited from those areas with shortages. His article covers a variety of incentives which could be useful in student recruitment from these areas, the educational program changes which should be considered to keep up with manpower needs, and the help which can result from increased use of dental auxiliary personnel.

81.

Willard, William R. "The Development of Medical School as a Community Resource." American Journal of Public Health, 54 (July, 1964), 1041-48.

Willard expresses his interest in the development of vital programs in public health and preventative medicine in medical schools, and in the position the university medical schools must fill as the health resource centers for communities. He cites the schools' need to help shape the attitudes of medical students while they are in the university environment, in order to instill them with a sense of social responsibility. The article traces the historical development of medical education. Willard writes authoritatively on the subject of the challenge to medical schools to develop community health programs, as he was one of the founders of the Department of Community Medicine at the University of Kentucky Medical College.

82.

Wolf, George A.; Brown, Ray E.; and Bucher, Robert M., eds. "Medical School-Teaching Hospital Relations." Report of the Second Administrative Institute of the Association of American Medical Colleges. Journal of Medical Education, 40 (November, 1965), Part 2, 254 pp.

In this 1964 AAMC Institute, teaching hospital administrators and medical school deans met together "on an equal basis" in order to discuss relationships between medical schools and teaching hospitals. The concerns of the Institute were focused upon the rapid growth of medical schools in size, complexity, cost and student population as well as upon the ever-increasing complexities within teaching hospitals, particularly in the areas of treatment and diagnosis and the growing costs of this treatment. The theme of the Institute as it was expressed by the editors was that: "the complex, interrelated objectives of medical schools and teaching hospitals must be understood; careful plans must be made for proceeding towards specified goals; and provision must be made for evaluating progress."

Articles presented in the Institute which are of particular interest included: A. J. Carroll's "Medical Education Costs in Hospitals"; E. S. Nourse's "Goals, Principles, and Mechanics of Cooperation: Topography, Problems, and Essential Elements of School-Hospital Affiliations"; R. T. Vigner's "Trends in the Teaching Hospital: Patient Care"; and H. L. Wilsey's "The Need for and the Development of Facilities: The Importance of Long-Range Planning for Medical Schools and Teaching Hospitals."

83.

World Health Organization. The Use of Health Service Facilities in Medical Education. Sixteenth Report of WHO Expert Committee on Professional and Technical Education of Medical and Auxiliary Personnel. WHO Technical Report Series 355. Geneva, Switzerland: World Health Organization, 1967, 36 pp.

The tasks set before the WHO (World Health Organization) Expert Committee were to identify all resources in the community (other than the hospital) "that represent those settings in which the future physician will actually work and to study ways of encouraging medical schools to use these potentially valuable facilities for training purposes." The Committee, acknowledged the limiting factors inherent in teaching hospitals, i.e., the emphasis on specialization and on individual patients rather than upon the community, and then focused on the characteristics and teaching advantages of the facilities in the community as the logical teaching laboratory for health personnel. The "community" concept is defined in two ways: as a geographical and political entity, and in a more restricted sense, as a limited special group of people in a neighborhood, factory or school. The community settings identified are centers for ambulatory care, domiciliary care situations, teaching health centers, and the broad array of public health and social service organizations. The report presents a full discussion of how best to utilize all of these, how to build an administrative system for central and regional control and how to plan medical programs and curriculums with the community as the all-important background.

84.

Worthingham, Catherine. "The Clinical Environment for Basic Physical Therapy Education, 1965-1966: Part I: Facilities." Physical Therapy, 48 (November, 1968), 1195-1215.

This is the second part of the report of Worthingham's study of physical therapy education and the first part of the report on clinical environment. It contains statistical data and some conclusions based upon a study of 441 clinical facilities associated with the 42 physical therapy schools utilized in her study. The report includes findings in fourteen specific areas of inquiry into clinical facilities and personnel. It provides a full description, with tables and graphs, of types of facilities and their affiliations; administrational structure, and number and responsibilities of professional staff; physical size and scope of facilities; and how facilities related to other clinical education programs operating in their locations.

85.

Worthingham, Catherine. "Findings of the Study in Relation to Trends in Patient Care and Education." Physical Therapy, 50 (September, 1970), 1315-32.

This article deals with implications which were derived from the previous five sections of the Worthingham study of basic education for physical therapy (all published in Physical Therapy). The report reviews the trends in patient care (most notably the trend toward treating more patients in out-of-hospital situations) and the trends in education for the health professions (particularly a need to find educational and experience equivalents in health fields so as to effect "a downward transfer of functions from the higher trained to lesser trained individuals" for better use of manpower). The author directs most of her attention to the final section describing the relationship of basic education and practice in physical therapy to trends in education and practice of all the health professions, which is a point-by-point examination of the expanding educational role and health care delivery goals that physical therapists and other health professionals will have to provide to "meet the needs of an awakened public."

FOR OTHER ENTRIES related to education for health care delivery see also:

208, 228, 239, 244, 245, 246, 266, 269, 310, 313, 341, 515, 540, 541, 542, 544, 560, 564, 570.

Practice Location and Manpower Distribution

86.

Andrus, Len Hughes, and Fenley, Mary. "Health Science and Rural Health Manpower." Medical Care, 12 (March, 1974), 274-78.

The authors deal with the ineffectiveness of our health science schools in educating and providing the manpower needed to administer to our nonurban population. They address a list of nine specific problems related to better rural health care delivery, and suggest a solution for each. In brief, they feel that educators will have to make vigorous efforts to decentralize urban health science schools, to provide incentives for students to enter community medicine, and to recruit students and faculty members from the rural areas.

87.

Beck, James D., and Gernert, Edward B. "Attitudes and Background Values as Predictors of Urban-Rural Practice Location." Journal of Dental Education, 35 (September, 1971), 573-81.

The authors report on a study which measured and compared the attitudinal behaviors of dentists and student dentists toward their choice of location for practice. Two hundred urban practicing dentists and 194 rural practicing dentists participated in a mail survey in which the student targets were the freshman, sophomore and senior classes at the University of Louisville and University of Kentucky dental schools. The findings indicated that practicing dentists had been influenced most importantly by friends, the availability of a good practice location, and the belief that the community could provide for the needs of their families. For the students the influencing factors were liking the area as a place to live, the likelihood of establishing a practice rapidly and the health needs of the community. For the most part the two groups displayed similar attitudes toward rural and urban areas, and their criteria for selection reflected only slight differences.

88.

Bible, Bond L. "Physicians' Views of Medical Practices in Nonmetropolitan Communities." Public Health Reports, 85 (January, 1970), 11-17.

The AMA Council on Rural Health surveyed 1,853 randomly chosen physicians in private practice in 1967 for this study into the problems of distribution and availability of health manpower for rural areas. Factors influencing choice of location, problems encountered living in nonmetropolitan areas, and degrees of satisfaction or dissatisfaction to community life or practice were subjects included in the questionnaire. Based upon their findings the authors concluded:

> "Implications for medical school admission committees suggest the importance of giving consideration to admitting more medical students with a rural background. In addition, medical schools, hospitals, and other agencies, in cooperation with medical societies, should study new methods of making available continuing medical education programs for physicians practicing in rural communities."

89.

Breisch, William F. "Impact of Medical School Characteristics on Location of Physician Practice." Journal of Medical Education, 45 (December, 1970), 1068-70.

This article records the relationship of the quality and location of medical schools to the distribution of graduates practicing in urban and in less urban areas. Results of a statistical survey disclosed that: (a) holding constant the medical school locations, the highest quality medical schools (those reporting highest per pupil expenditures and faculty salaries) supplied eight percent more graduates to metropolitan areas than did the lowest quality schools; (b) there was a direct relationship between the population size of the county in which a medical school is located and the percentage of graduates who practiced in metropolitan areas.

90.

Bureau of Economic Research and Statistics. "Survey of Recent Dental Graduates; II. Factors Related to Selection of a Practice Location." Journal of American Dental Association, 87 (October, 1973), 904-06.

This is a straightforward report and discussion of the data gathered in a survey of dental graduates to identify the influences on their choices of practice location. It is illustrated with tables showing the ranking of determining factors of: father's occupation, size of city of parents'residence, size of city of spouse's parents' residence, as well as a table reflecting the results of the respondents' rankings (in order) of the five most important factors which affected their selections of location.

91.

Cooper, James K.; Heald, Karen; and Samuels, Michael. "The Decision for Rural Practice." Journal of Medical Education, 47 (December, 1972), 939-43.

The Congressional enactment of the Comprehensive Health Manpower Training Act of 1971 demonstrates the concern in this country over the insufficient number of physicians in rural areas. The act authorizes appropriations to medical schools for projects to increase the enrollment of students who are likely to establish practices in areas of severe medical need. In order to identify these students it is important to know the factors which have been found to influence a physician's decision about where to locate. The authors report that the factors can be classified into three groups: personal, professional, and community. In this article they present a summary table showing the relationship of each factor to the physician's decision.

92.

Davis, Louis E., and Andrews, Robert B. "The Health Care System Looks at Allied Health Personnel." Clinical Obstetrics and Gynecology, 15 (June, 1972), 305-18.

It has been suggested that our expanding health manpower needs can be met at least partially by the use of more allied health personnel to assume some of the tasks of the physician, but these authors caution physicians to let experts in organization and job design fully analyze the situation first. They want to assure careful evaluation of all alternatives, and they urge that redesign of the health care system structure and organization precede creation of any new jobs or occupations.

93.

DuVal, Merlin. "A Program for Rural Health Development." Journal of the American Medical Association, 221 (July 10, 1972), 168-71.

Providing and distributing health manpower must be the paramount concern of program developers for rural health systems. The author describes present health problems and inadequacies, as well as the unbelievably high costs of health care. He says costs have been made even more devastating by "disorganized, inefficient, ineffective health arrangements, with emphasis on acute sickness rather than health maintenance." In its efforts to find solutions to all these problems, the government has inaugurated a number of health care programs through the establishment of Health Maintenance Organizations, family health centers, a National Health Service Corps, Health Manpower Acts, and emergency medical aid to needy areas. The author also discusses a number of community programs in progress.

94.

Fahs, Ivan J., and Gibilisco, Joseph A. "Factors Influencing Dentists' Choice of Practice Location." Northwest Dentistry, 51 (January-February, 1972), 11-15.

The authors report on a study which was part of the Health Manpower Study requested by the Minnesota Board of Regents to aid the University in deciding whether to expand its facilities for medical and dental education. The influences on practice location of dental graduates were of major concern. Those cited included climate, the possibility of post-graduate training, educational advantages for children, familiarity with area, and availability of good hospital facilities.

In the view of these authors these factors may not be the same factors which exert the strongest influence over the decisions of future dental graduates. They believe that attitudes toward practice location will be altered as population centers shift, and as progress in transportation puts desirable facilities in easy reach. They suggest that influencing factors be kept under study and that means be determined to modify the factors which create maldistribution of health manpower.

95.

Foy, Donald F. "Mechanisms for Influencing Physician Distribution." Paper presented at the Annual Conference of the Woman's Auxiliary to the Student American Medical Association, Los Angeles, Calif., April 27, 1972, 14 pp.

In this paper Foy is concerned with the continuing problem of physician maldistribution in this country. He points out the need to identify ways to encourage physicians and other health professionals to choose careers in the inner cities and rural areas. First he reviews three commonly accepted facts: that physicians who practice in underserved areas are usually natives of this kind of environment, that exposure to isolated practice during medical school can be influential in the student's choice of practice location, and that communities without physicians can be encouraged to make their environments more attractive to physicians and their families. Forms of inducement currently in use to attract professionals to the needy areas include forgiveness of student loans, community development of medical facilities and guarantees to physicians, rural preceptorships, special tuition and loan considerations, and government sponsored community health centers. Foy concludes with descriptions of some specific programs. Two of these, "Project 75" and "Urban Doctor Program" are designed to recruit and train minority students to work in health care facilities serving the needs of underprivileged minorities. Another type of program offers a decentralization of medical education, allowing first-year students to take basic sciences in colleges and universities throughout a region, and providing actual experience in community medical care with practicing physicians. The American Medical Association involvement in these programs and in other areas of health care delivery is discussed.

96.

Greenberg, Suzanne B., and Kadish, Joseph. "Geographic Mobility of Allied Health Professionals." Journal of Allied Health (Spring, 1974), 100-02.

This article reports a study carried out in New York state to determine a methodology for identifying patterns of geographic and occupational mobility of graduates of selected allied health education programs. The methodology of the study consisted of the identification and location of graduates of programs in nine allied health categories by response to letters mailed to a complete list of educational institutions offering allied health programs in New York. The findings of the study indicate that allied health personnel trained in New York are not geographically mobile, and that although a number of graduates moved out of New York State soon after graduation, many returned to locations near the schools in which they received training. The findings appear to support the position which some educators and planners have held that training programs attract students from nearby areas and graduates can often be expected to remain in the area to serve local health needs.

97.

Hamilt, Milton W. "Problems and Trends to be Faced as Allied Health Professions Evolve." Hospital Management, 112 (August, 1971), 20.

The author identifies some of the problems which face the allied health professions and suggests some solutions. The problems identified include the lack of coordination at a national level between the allied health disciplines, the overlapping of many allied health disciplines, the decrease in public confidence, the maldistribution of allied health personnel, the high costs of allied health education (which are often placed upon the patient), and the need for leadership in developing a team approach for medical care. The author suggests that "the time is ripe for leadership (in the evolution of the allied health profession) and concerted action in taking the first steps."

98.

Hansen, M. F., and Reeb, Kenneth B. "An Educational Program for Primary Care." Journal of Medical Education, 45 (December, 1970), 1001-15.

This paper has two purposes: (1) to define a health system model in operationally useful terms, and (2) to propose a set of hypotheses relating properties of the health system to health outcome. The authors describe a health system model having three clinical "sectors": (1) primary care, the unique site of entry into the health system, (2) consultant or secondary care, and (3) subspecialty, categorical or tertiary care. They present some general hypotheses which provide a set of overall objectives for the development of educational and clinical programs, followed by specific hypotheses which relate to the three sectors in their model. The article concludes with an outline of the curriculum of the Program in Primary Care at the University of Wisconsin Medical School, designed to organize the educational content of a clinical discipline to primary care. The model hypotheses described in this paper were used as guides in the development of the program.

99.

Kaplan, Robert S., and Leinhardt, Samuel. "Determinants of Physicians' Office Location." Medical Care, 11 (September-October, 1973), 406-15.

These authors report on a survey of physician offices in the city of Pittsburgh to test the assumption that the number of offices in low income and black urban areas is small and correlated with the low income levels. This assumption was not supported by the authors' study. The data they analyzed indicated that the nearness of hospitals and the presence of sizable areas of commercial zoning were the principal factors which influenced physicians' office locations. Income of an area exerted no influence one way or the other, although physicians' offices tended to be fewer near concentrations of blacks.

100.

Kissick, William L. "Effective Utilization: The Critical Factor in Health Manpower." American Journal of Public Health, 58 (January, 1968), 23-29.

The author is an advocate of improving or increasing the level of health services by making changes in the utilization and organization of manpower rather than by increasing the numbers of health professionals. He discusses the improvement in utilization which could be brought about by a downward transfer of functions to auxiliary personnel, by application of technology, by career mobility, and by development of educational programs geared to the downward transfer of functions. He is a proponent of core curriculums as the means to avoid repetition of learning in career mobility. The article concludes with a discussion of the problems to be anticipated with both consumers and professionals if such changes are undertaken.

101.

MacLeod, Gordon K., and Pressin, Jeffrey A. "The Continuing Evolution of Health Maintenance Organizations." New England Journal of Medicine, 288 (March 1, 1973), 439-43.

This is an informative discussion of Health Maintenance Organizations, concentrating on their structure and the benefits which they offer to the community. The article also discusses the usefulness of HMO's in the teaching-training of medical trainees, who are afforded the opportunity to learn to practice in a way that is truly relevant to their needs and to the needs of the communities they will eventually serve. In the abstract of their article the authors state, "Of the various health-care systems currently available to the American people, Health Maintenance Organizations most nearly meet the objective of providing access to high-quality comprehensive medical and health-care services at the most reasonable cost possible. Preventive services, early disease detection, diagnosis and treatment of illness and injury are all equally emphasized in the HMO....Basic principles for developing an effective HMO include pre-payment, a contractual responsibility between the plan and its members, and autonomous and self-governing physicians' organization, physicians' payment influenced by shared financial responsibility, integrated services, voluntary enrollment and comprehensive coverage."

102.

Mason, Henry R. "Effectiveness of Student Aid Programs Tied to a Service Commitment." Journal of Medical Education, 46 (July, 1971), 575-83.

This study project was confined to scholarship and loan programs sponsored primarily by state governments and state medical associations. Its principal concern was the experience of aid programs in which medical students agree to practice in rural communities upon completion of training, most often called "forgiveness programs" -- the term referring specifically to the cancellation of the principal (and/or interest) received by the physician in exchange for his engaging in the rural practice of medicine for a stipulated period of time.

Study findings dealt with 17 states which had such forgiveness programs, 11 of which had been in existence long enough to have a significant number of physician-borrowers who had completed training. Overall, in the majority of states there was about a 60 percent rate of follow-through, where physicians stayed on to practice in rural areas. Educators concede that if only 50 percent fulfill the commitment to remain this will be a reasonable yield. Newer programs may produce better results.

103.

Meskin, Lawrence H.; Bjella, Gary N.; Kenney, James B.; and Geier, John G. "Factors in Choice of Dental Practice Location: A Survey of University of Minnesota Graduates, 1950-62." Northwest Dentistry, 47 (March-April, 1968), 102-06.

In this survey of University of Minnesota graduate dentists from the classes of 1950, 1953, 1956, 1960, and 1962, their choices of practice location were examined in an effort to determine why dental students, who were entering the dental school in an equitable proportion from the state's geographical dental districts, were not returning to all areas in equal proportion. Data from the study showed that certain groups of students are amenable to practicing in rural locations, if they are (1) unmarried, and (2) from a rural background. The investigators concluded that a concentrated effort should be made on the part of the dental school to reacquaint rural students with the opportunities available to them in rural practice.

104.

Parker, Ralph C., Jr., and Tuxill, Thomas G. "The Attitudes of Physicians Toward Small-Community Practice." Journal of Medical Education, 42 (April, 1967), 327-44.

The findings of a study made in New York State indicate that there is a critical period in a young physician's career affecting his decision about location. This occurs during his internship and residency or during very early years of practice, at which time he is influenced by the size of the community in which the teaching hospital is located, by the teachers and preceptors in the educational program, and to some degree, by his wife. His own origins, his attitude toward small- or large-community living, and his specialty also govern his decision. The authors urge medical educators counselling their students to take into consideration the needs and resources of the communities outside the medical center environment. They see a trend developing toward locating in medium-sized communities, where young specialists can enjoy an association with good hospitals but avoid the competition of big-city practice.

105.

Parker, Ralph C., Jr.; Rix, Richard A.; and Tuxhill, Thomas G. "Social, Economic, and Demographic Factors Affecting Physician Population in Upstate New York." New York State Journal of Medicine, 69 (March 1, 1969) 706-12.

This study of rural counties in Rochester, New York, explores the relationship of the density of physician population to economic and population factors. Given the unfavorable conditions prevailing at the time they were writing, the authors predicted no trend toward improvement for the future unless there were serious efforts made to recruit, finance, and retain student-doctors for these areas. They explore in detail the factors affecting physicians' attitudes toward rural practice, and they make recommendations for providing health care through efficient use of all health personnel. They advocate establishing a system centered around rural health centers and uniting doctors in group practices and partnerships.

106.

Peterson, Osler.; Andrews, Leon P.; Spain, Robert S.; and Greenberg, Bernard G. "An Analytical Study of North Carolina General Practice, 1953-1954." Journal of Medical Education, 31 Part 2 (December, 1956), 1-165.

The authors report a hallmark study of general practitioners in North Carolina during the years 1953-1954, which was designed to "reveal the extent to which scope, training for and organization of practice influenced its conduct." In order to accomplish this goal, extensive information was collected concerning the following: the general practitioners' patients; the background of the general practitioners themselves, including their premedical and medical education, training, and experience; the care patients received from these physicians; information on the organization, facilities, and personnel available to aid the physician; information on the city and area of the physician's practice and its medical activities and facilities, the specialists available and study opportunities; as well as information about a miscellaneous group of facts which might influence the physician to alter his work. The authors feel that the study revealed much information concerning the problems of the general practitioner, perhaps the most significant of which was the finding of the great importance graduate training in internal medicine plays in giving a physician a comprehensive viewpoint and emphasizing the basic technique of diagnosis. Further areas of investigation which were indicated by the results of this study are also identified.

107.

"Priorities for Increasing Availability of Health Services in Rural Areas." Journal of the American Medical Association, 222 (December 4, 1972), 1284-85.

This article presents a summary report of the joint activities of the American Medical Association's Council on Rural Manpower and Council on Rural Health in their attempt to foster a coordinated-systems approach to meet the health needs of medically deprived areas. Included in this report is a brief summary of the problem and a list of methods proposed and used to place physicians and other health professionals in deprived areas. The report concludes that no simplistic solution is applicable to all medically deprived locales, and therefore, each area will be required to produce plans which incorporate approaches adaptable to its needs. Of prime importance is coordinated planning between multiple communities in a logical health service area in order to develop "health-care systems on a regional basis to attract and be able to support the needed health manpower and resources." The councils list activities towards this end, to which they have given immediate priority.

108.

Samuels, Michael E. "Factors Influencing Primary Care Physicians to Select Non-Metropolitan Locations." Unpublished Ph.D. dissertation, School of Public Health, Department of Health Administration, University of North Carolina at Chapel Hill, 1974.

This dissertation contains a comprehensive review of the literature relating to the factors which influence physicians to locate their practices in rural areas. This is followed by a report of a survey of medical school graduates designed to identify the factors which influenced their choice of practice locations. The study utilized two mailed survey questionnaires. The first survey of 7,500 members of the United States medical school gradating class of 1965, was followed by a second mailing to all of the rural primary care physicians identified in the initial survey, and to a control group of all of the urban primary care physicians who indicated that they had ever seriously considered entering rural practice. The paper includes tables summarizing the influences on physicians' location decisions and the author's recommendations on how to increase the number of students with rural backgrounds and to expose students to rural practice during their training.

109.

Taylor, Mark; Dickman, William; and Kane, Robert. "Medical Students' Attitudes Toward Rural Practice." Journal of Medical Education, 48 (October, 1973), 885-95.

The authors report on a survey of approximately 200 medical students (and the spouses of those who are married) from predominantly rural states in an effort to assess their attitudes toward rural practice. There were strong correlations between a student's background and his location plans, and it was particularly evident that the wife's background was a strong influence on those planning to locate in rural communities. There was also a strong relationship between interest in family practice and plans for rural practice. The findings point to some fairly obvious considerations for filling rural health manpower needs, and the authors stress the importance of directing federal, regional, and state resources toward the establishment of a few rural training models of considerable depth and breadth.

110.

U. S. Department of Health, Education, and Welfare, Division of Comprehensive Health Planning, Public Health Service. Factors Influencing Practice Location of Professional Health Manpower: A Review of the Literature, by Josephine D. Arasteh. DHEW Publication No. (HRA) 75-3, Washington, D.C.: Government Printing Office, July 1974. (Distributed by National Technical Information Service, U. S. Department of Commerce #PB-236 950.)

This publication is a review of the literature on the geographic distribution of health manpower in the United States. It is intended for use by those concerned with any of the plans, policies, or programs designed to affect the choices made by health professionals in locating their practices. Published references and current studies are cited. There is a discussion of the effect of licensure and certification on the mobility of health professionals and of the legislative efforts and other proposals presently under consideration to remedy maldistribution.

111.

Warner, Anne. "NHC's Manpower Distribution Project--Finding Ways to Interest Students to Practice in Shortage Areas." Journal of Allied Health, 4 (Winter, 1975), 27-34.

This article describes projects in several locations in this country designed to remedy the problem of manpower maldistribution. It is hoped that examining the effects of the operation of these projects will provide useful data and resource information for planning future programs. As the projects are presently in progress the accumulation of data is incomplete. Ms. Warner describes each of the seven projects (e.g. the Appalachian Kentucky Study, Rural Maine Project, Inner City Project in New Orleans). It is not her intention in this article to analyze the factors which are producing the need for the programs.

112.

Weiskotten, Herman G.; Wiggins, Walter S.; Altenderfer, Marion E.; Gooch, Marjorie; and Tipner, Anne. "Trends in Medical Practice. An Analysis of the Distribution and Characteristics of Medical College Graduates, 1915-1950." Journal of Medical Education, 35 (December, 1960), 1071-1121.

This report on graduates of the class of 1950 is one of a classic series of published surveys of every fifth class of medical college graduates in the U. S. The surveys are designed to provide medical educators with information useful to their program planning. The data collected includes information on characteristics and distribution such as age (the 1950 class had the oldest average age at graduation of any class surveyed); type of practice (group, partnership, other); specialty, if any, and its relationship to age and other factors; teaching and/or research activities; practice location and its relationship to various influences; and proportion of graduating physicians from public and private schools.

FOR OTHER ENTRIES related to practice location and manpower distribution see also:

573.

Clinical Faculty

CLINICAL FACULTY

Preparation, Behaviors, Roles

113.

Adams, William R.; Ham, Thomas Hale; Mawardi, Betty Hosmer; Scali, Henry A.; and Weisman, Russell, Jr. "A Naturalistic Study of Teaching in a Clinical Clerkship." Journal of Medical Education, 39 (February, 1964), 164-74.

This article describes a pilot study of teacher-student interactions in the clinic which employed a somewhat different methodology of evaluation. Teacher-student interactions were observed and recorded and then the instructor was questioned about his objectives; categories of behavior were derived from the observed behaviors. Then the observed behaviors were categorized according to what the instructor had been emphasizing, or how the emphasis was made. Teachers were rated on effectiveness of their emphasis.

The authors point out that this kind of evaluation can be used to determine the emphases of a clinical education program. It can also identify the effective and ineffective aspects of an individual instructor's performance, enabling his placement in the area of his best performance, and, at the same time, alerting him to his weaknesses and increasing his awareness of objectives.

114.

American Physical Therapy Association. "Standards for the Physical Therapy Practitioner, Adopted by the Board of Directors, February 1972." Physical Therapy, 52 (June, 1972), 647-49.

This set of standards covers a broad range. Included in the Board's adopted guidelines are the practitioner's responsibility for standards in these areas; personal qualities, professional conduct, patient management, administrative skills, interdisciplinary relationships, professional growth and continuing competency, research, consultation.

115.

Association for Student Teaching. "The College Supervisor: Standards for Selection and Function." National Education Association, Washington, D. C., 1968, 16 pp. (Library of Congress Catalog No. 68-29666.)

This pamphlet includes point-by-point descriptions of the role, characteristics and responsibilities, as well as the criteria for selection, of the college supervisor of student teaching. Worthy of mention is the emphasis on the need for well-qualified supervisors who have (preferably) had some formal preparation for their demanding roles. Other important considerations in filling the role of supervisor are that graduate students do not make good supervisors unless they themselves are being supervised while being trained to supervise, and that if supervisors must assume roles of heavy responsibility they should be granted a corresponding degree of status.

116.

Baines, Tyrone R. "The Faculty Supervisor." Implementing Field Experience Education. Edited by John Duley. New Directions for Higher Education, No. 6, Summer 1974. San Francisco, Calif.; Jossey-Bass, pp. 39-44.

The author, director of the Public Administration Internship Program at North Carolina Central University in Durham, North Carolina, wholeheartedly endorses the use of field experiences as learning devices. He presents in this article a description of the role of the faculty supervisor to illustrate the complexities of that job and to support his view that it should be separate from that of the program administrator.

An examination of types of field experiences, broken down into three categories or models, is followed by a detailed description of the manifold duties that may be required of the effective supervisor: (1) design program--define goals, provide continuous supervision and monitoring, provide concrete tools and procedures for evaluation; (2) secure approval of program (there is more commitment if program carries credit); (3) select and supervise students; (4) establish host agencies and maintain relations with them; and (5) act as troubleshooter.

117.

Barham, V. Z. "Identifying Effective Behavior of the Nursing Instructor Through Critical Incidents." Nursing Research, 14 (Winter, 1965), 65-69.

Barham describes the collecting of 362 critical incidents of effective and ineffective teaching behaviors in an effort to identify effective behavior of nursing instructors. This study was carried out through a program of group interviews with 178 respondents, who included directors, instructors, and first and second year students in associate degree programs in California. Nineteen teaching behaviors were identified.

118.

Blumberg, Arthur. Supervisors and Teachers: a Private Cold War. Berkeley, Calif.: McCutchan Publishing Corporation, 1974, 182 pp.

The author suggests that the relationship between teachers and their supervisors should change, from one of mutual defensiveness to one of openness and supportiveness. Defining supervision as help, Blumberg notes that teachers who consider their supervisory experiences productive, think of their supervisors as human beings first and as supervisors second. In the discussion of the various problems of supervision, this book stresses that, in order for supervision to help upgrade the quality of teaching, all concerned must stop making untested assumptions about the attitudes and motivations of others.

119.

Boyle, Kathleen. "Values of the Practice Component of Graduate Study Received by Beginning Teachers in Baccalaureate Nursing Programs." Unpublished Ph.D. dissertation, Teachers College, Columbia University, New York, 1971. (06, no. 5077.)

Ms. Boyle's dissertation deals with the attitudes of new teachers on nursing education faculties toward the clinical education they received in graduate curriculums of a few years ago. They had enrolled in master's programs to prepare themselves for jobs as "clinical specialists," only to find afterwards that jobs were not available. Subsequently many of these nurses found themselves teaching in baccalaureate nursing programs, and this study documents their feelings of unpreparedness for their teaching roles in light of the fact that their graduate study had included no student teaching.

This paper is also a review of literature from the general field of education, with in-depth exploration of the "apprentice-master", conformist pattern of practicum vs. the well-designed "laboratory" experience with specific educational objectives.

120.

Canfield, Albert A., ed. Competencies for Allied Health Instructors. Gainesville, Florida: Center for Allied Health Instructional Personnel, University of Florida, 1972. 24 pp.

Expert opinion was gathered to determine the kinds of abilities, attitudes, values, and skills essential to effective teacher behavior in allied health. The survey identified all areas in which the effective teacher in the health field must function. The author presents a definitive list of competencies based on the needs of these various roles the instructor must fill. From these competencies a list of goals for an allied-health-teacher program was prepared. These are set forth in an item-by-item description of desirable competencies.

121.

Clissold, Grace K. How to Function Effectively as a Teacher in the Clinical Area: a Resource Unit. New York: Springer, 1962, 111 pp.

Although this book is very general, of special interest is the emphasis it places on the difference between the classroom and clinical teacher, noting that in the clinic, the nursing instructor has no authority over the environment and is responsible for the education of the student as well as for the safety of the patient.

122.

Conine, Tali A. "Teacher Preparation Based on Functions and Opinions of Educators." Physical Therapy, 53 (August, 1973), 876-82.

This is the report of a survey in which 212 physical therapy teachers were given the opportunity to list the courses or processes which they had used in acquiring their teaching knowledge and skills, and how they would rate their importance in teacher preparation. The three processes ranked most important and most often used were: clinical teaching, teaching and learning by trial and error, and imitating other teachers. The areas considered most needed for teacher preparation were: methods and techniques used in education, and specialized knowledge in their fields.

123.

Cunningham, William G. "The Impact of Student-Teacher Pairings on Teacher Effectiveness." American Educational Research Journal, 12 (Spring, 1975), 169-89.

This article focuses on a dimension in evaluation of teacher effectiveness which has received relatively little attention, i.e., the analysis of student characteristics as they relate to analyzed characteristics of their teachers. Most studies imply that a combination of certain desirable behavioral characteristics in teachers will produce teaching competence of a high order. Cunningham is interested in what may be learned from a study of the interaction of certain types of students with certain types of teachers. It is necessary to accept the psychologists' evidence that different individuals react differently to similar stimuli. This study used an analysis of variance procedure to show that a certain type of teacher was significantly more effective with one type of student than with another. The implications are that combinations of certain types of students and teachers in the classroom could be effected for the greatest likelihood of teaching success--matching students and teachers.

124.

Davis, Carol M., and McKain, Ann E. "Clinical Education: Awareness of Our 'Not-OK' Behavior." Journal of the American Physical Therapy Association, 55 (May, 1975), 505-06.

This is a brief exhortation to clinical instructors in physical therapy to examine their behavior in the clinical setting and to decide if it is of the "OK" quality for students to model upon. The authors stress the importance of the teacher-student relationship in attitude development and cite the fact that new graduates of physical therapy choose their clinical instructors over all others as role models for their own behavior. The clinical instructor must, therefore, examine and understand his own attitudes and behavior in order to effect whatever changes might improve his example to his students.

125.

deZafra, Carlos, Jr. "Psyche of Successful Teaching." Clearing House, 42 (December, 1967), 240-41.

The article suggests that the psyche of outstanding (as opposed to mediocre) teachers is composed of six elements: individualism, dedication, creativity, maturity, empathy, and stamina. For the successful teacher who completely devotes himself to teaching, the rewards include an added significance and enrichment of life.

126.

Diaz-Buso, Yolanda. "Relationship of the Clinical Supervisors to the Schools of Physical Therapy." Unpublished master's thesis, Stanford University, 1956.

The purpose of the study reported in this thesis was to determine the status of physical therapy clinical supervisors (clinical instructors) in relation to academic preparation, faculty appointments, remuneration, and responsibilities in supervision. The data reviewed and summarized was obtained from 140 questionnaires returned by clinical supervisors, all listed as members of the Section for Education of the American Physical Therapy Association, and represents the information from all usable questionnaires (there were 210 in the total mailing). The findings of the survey can be summarized in five general conclusions. (1) The academic background of physical therapy school clinical supervisors was found to be comparable to that deemed necessary for similar responsibilities in nursing education. (2) Status created by academic rank is important to clinical supervisors, for the rank is a symbol of prestige both within and without the clinical facility. (3) Extra remuneration for supervisory duties was not a factor in supervisors' appointments or satisfactions. (4) The responsibilities of clinical supervision and the arrangements for relieving supervisors of other duties were so varied as to appear not to be significantly consistent. (5) The fact that even a few (7) individuals failed to appreciate any advantage in having students in their facilities suggests that the schools should develop this orientation.

127.

Dorman, Gerald D., and Hoover, Norman. "Teaching the Teacher to Teach." Medical Journal of Australia, 1, Supplement 7 (June 3, 1972), 61-63.

The authors predicate this paper on the conviction that education is a science and an art and that medical educators must be taught the scientific skills of the teaching profession. They recommend that teachers be taught how to improve their teaching in a combined approach, using graduate medical education ("specialist-physicians being the primary purveyors"--this would combine "understanding of educational methodology with advanced knowledge of content") and "the development of a limited number of highly developed centres for educational studies in medicine." There is a brief discussion of the direction medical education must take if it is to supply the programs to fill known health needs, including a look at the role technology should play.

128.

Eckert, Ruth E. "New Tasks for Teachers: The Changing Personnel." Evaluating Teaching and Learning. Edited by Robert C. Pace. New Directions in Higher Education No. 4, Winter 1973. San Francisco, Calif.: Jossey-Bass, pp. 41-57.

This article describes the personal characteristics and professional attitudes needed by teachers who expect to meet successfully the demands of today's more student-centered education. The effective teacher needs to be more socially and theoretically oriented, more enthusiastic and flexible, more nurturant of students and better organized. He will have to perform capably in a number of roles: (1) dreamer ("delineator of the possible"), (2) designer (personal program designer for individual students), (3) developer (partner and guide in business of learning), and (4) diagnostician (evaluator of learning, reviewer of goals). Looking ahead, it is imperative that educators develop openness to change, new and diversified faculty, and more effective evaluation methods.

129.

Flanders, Ned A. "Personal-Social Anxiety as a Factor in Experimental Learning Situations." Journal of Educational Research, 45 (October, 1951), 100-10.

The author considers the influence of teacher behavior on student learning, citing findings in experimental learning situations. The conclusions can be drawn that interpersonal anxieties created by negative teacher behaviors can disrupt the learning process, and that extremes of directive, demanding, deprecating behavior can produce withdrawal, apathy, aggressiveness and even emotional disintegration of the student.

130.

Gamble, Thomas E. "The Practicing Physician's Involvement in the Training of Medical Students." Journal of Medical Education, 49 (April, 1974), 331-37.

This study records the attitudes of 20 practicing physicians toward an innovative experimental medical education program in which they were involved as nonsalaried clinical faculty. The program was conducted at the University of Illinois College of Medicine. It consisted of a guided study curriculum in which first-year medical students approached basic sciences through series of clinical problems. Each student, assigned one physician as an advisor and one as an evaluator, worked with the volunteer physicians for four hours per week. A survey of the physicians' attitudes showed they had positive feelings about the following: (a) continuing education benefits to the physician through involvement in teaching; (b) pedagogical implications of semi-independent guided study curriculum as compared with a traditional program; (c) their availability of time for involvement in such a program; (d) impact of teaching involvement on practice (introduction of students was not disruptive to hospital or patient); (e) personal and professional reaction to teaching role.

131.

Glass, Helen Preston. "Teaching Behavior in the Nursing Laboratory in Selected Baccalaureate Nursing Programs in Canada." Unpublished Ph.D. dissertation, Columbia University, 1971, Dissertation Abstracts 32, 3152-A.

Designed to provide generalizations about teaching behavior and to find implications for the preparation of teachers and professional nurses, this study used the Grounded Theory, formulating its categories from its research data. Because the teachers, who are nursing school faculty, are guests in the agencies where students affiliate, it was found that teachers are apt to isolate themselves and be defensive, thereby cutting the students' options and discouraging students from developing any social responsibility. Also, because teaching strategies are often a result of the time pressures from the agency or university scheduling, teachers tend to concentrate only on the present, ignoring the past or future orientations for the students. This work concludes by urging further study of the risk and timing factors which influence teaching behavior in the agencies.

132.

Goin, Marcia K., and Kline, Frank M. "Supervision Observed." Journal of Nervous and Mental Disease, 158 (March, 1974), 208-13.

The investigation described in this article was an effort to distinguish differences in teaching behavior and to specifically identify the qualities that make a teacher outstanding. Investigators videotaped five different supervisors of second-year psychiatric residents in meetings with their student-residents. Two supervisors had been identified consistently by the residents as "outstanding" and three as "moderately good." To study each videotape (videotaping was selected as a means of objectively observing the ordinarily private atmosphere of psychotherapy supervision), the observers arranged three settings: (1) with the investigators alone, (2) the participant supervisor together with an investigator, and (3) the participant resident together with an investigator. The analysis that followed showed that the outstanding supervisors "made more didactic comments about patients and technique than did their moderately good counterparts. These supervisors were also neither extremely passive nor authoritatively directive, but seemed to find a middle ground of activity. Their residents also heard them as making more helpful, information-giving comments about the technique and the principles of psycho-therapy."

The authors point out that these findings are of particular interest running counter to the view (in psychiatry) that clinical teacher-supervisors should provide residents with freedom to achieve their own emotional growth, and be afforded this opportunity with little or no didactic instruction.

133.

Greben, Stanley E.; Markson, Elliott R.; Sadavoy, Joel. "Resident and Supervisor: An Examination of Their Relationship." Canadian Psychiatric Association Journal, 18 (December, 1973), 473-79.

This article deals with the desired relationship between psychiatric resident and supervisor and provides guidelines for developing beneficial clinical relationships which apply as well to other areas of health education. The authors describe the following optimum conditions to enhance the learning experience of the resident:

(1) The general atmosphere should permit a free exchange between teacher and student.

(2) As the student is already at a high level of postgraduate work, he should take the initiative in improving his own skills, while availing himself of the teaching experience at hand.

(3) An atmosphere of informality between student and teacher will make learning more pleasant and more effective.

(4) The student should be exposed to a variety of training experiences to enable him to approach the question of learning from different directions; i.e., provide him with rounds of various kinds, large conferences, small-group conferences, as well as one-to-one meetings with his individual supervisor on a weekly basis.

(5) The student should be brought into contact with many experienced therapists for his fullest development, but with only a few supervisors. He will choose role models and develop, in time, in a manner suited to his own capacities.

(6) Supervisors best suited for the task will be active practitioners in psychotherapy; they will be comfortable working intensively with patients; they will be able to allow the resident to develop in directions which are best for his own needs and talents.

134.

Hall, Vernon C. "Former Student Evaluation as a Criterion for Teaching Success." Journal of Experimental Education, 34 (Fall, 1965), 01-19.

Hall reports on a study of teacher behaviors which asked former students (1217 college undergraduates) to evaluate teachers they had experienced in prior years. His rationale for this evaluation was that the long-term influence is the important aspect in measuring a teacher's competence, and that former students' evaluations of their teachers can help identify the criteria of teacher success. The method employed in the survey was a request to students to submit: (1) the names of three of the best and three of the worst teachers they had ever experienced; (2) the years and schools in which the teachers were encountered; (3) subjects taught by these teachers; (4) a list of the perceived effects of the very best and the very worst teachers; and (5) a character sketch of the teachers rated very best and very worst.

Teacher behaviors which emerged from this survey to describe best and worst teachers are presented in detail. It was found that best teachers are remembered more often as having both academic and personal influence. Motivation was the most important area in which the best teachers had influenced their students. The worst teachers had left no lasting impression other than negative feelings about the classroom experience.

A sample group of these "best" and "worst" teachers took the Minnesota Teacher Attitude Inventory, which produced significant differences in rank scores of the two groups, but the scores were not reliable enough to make individual predictions. Hall then had a group submit to interviews with him (the questions and criteria are included on page 19). He found that in this interview the best and worst groups were clearly differentiated by their responses to his questions. It is his belief that his method shows great promise for developing criteria of teacher success.

135.

Harbin, Calvin E. "The PBTE Catechism." Kappa Delta Pi RECORD (October, 1973), 1-3.

This is a short introduction to Performance-Based Teacher Education or PBTE. The basic difference between PBTE and traditional teacher education is the emphasis in the former upon the learner's ability to perform specific competencies rather than to attain grades, i.e., the ability to achieve behavioral objectives. The author includes a discussion of Performance Based Teacher Certification and the relationship of PBTE to accountability in education.

136.

Hicks, E. Perry. "Changing the Role of the Cooperating Teacher." Journal of Teacher Education, 20 (Summer, 1969), 153-57.

This article describes a program conducted by the College of Education at the University of Rochester during 1966-67. The objectives of the program--to improve student-teaching, develop a core of cooperating teachers, and establish better relations between the university faculty and the schools--were all met. Cooperating teachers were involved in planning the program by serving on the advisory committee for the college's teacher education program; they were also made associates in teacher education in the College of Education. Their functions included participation in the methods courses taught at the University and in an in-service workshop on the newest trends in their field, as well as working with student-teachers in their classrooms. The overall reaction among students, staff, and cooperating teachers was enthusiastic. Particularly satisfying to cooperating teachers was the increased degree to which the college supervisor worked with them.

137.

Hillsman, Gladys M. "But Who Supports the Instructor?" Nursing Outlook, 11 (July, 1963), 502-05.

This author must be described as very concerned with humanizing nursing education. She urges sensitivity to the emotional needs of the clinical instructor in nursing, particularly the new instructor, who is often "thrust into a situation where expectations are not defined and where she feels ill-equipped to manage." The article emphasizes the value of being positive and giving lots of praise and encouragement and of making it safe to bring feelings out in the open. The article focuses on support for the instructor but also tells the instructor how to support the students.

138.

Isaacson, Robert L.; McKeachie, Wilbert J.; Milholland, John E.; Lin, Yi G.; Hofeller, Margaret; Baerwaldt, James W.; and Zinn, Karl L. "Dimensions of Student Evaluation of Teaching." Journal of Educational Psychology, 55 (December, 1964), 344-51.

The authors state that we must know the dimensions on which teachers vary before we can identify which teacher behaviors make crucial differences in students; achievement of educational goals. This article deals with identifying the dimensions of teacher behavior as it is perceived by students. Factor analysis of a number of rating scales led the authors to conclude that the most clear-cut dimension on which college teachers differ has to do with friendly sympathetic relationships with students. By administering an evaluation instrument containing 46 rating items and one "additional comments" question to about 1200 students and factor analyzing the results, six behavioral factors affecting relationships with students were identified: (1) general teaching skill, (2) overload tendency (assigning too much work), (3) structure (course organization), (4) feedback (voicing concern over quality of work, validation), (5) group interaction, and (6) student-teacher rapport.

139.

Jacobson, Barbara. "Role Modeling in Physical Therapy." Physical Therapy, 54 (March, 1974), 244-50.

This article explores the comparative influence of the classroom instructor and the clinical teacher as role models for physical therapy students. The author cites the fact that although the clinical therapist is commonly believed to be the more influential, no physical therapy research literature is available to support this belief. In her own investigation, Ms. Jacobson posed the question, "What is the degree of agreement or amount of similarity between the perceived professional characte[illegible] of the recent graduate and the two types of physical ther[illegible] models?" Ninety-five recent graduates were asked individually to choose characteristics of: (1) herself as practicing therapist, (2) her model female physical therapy classroom teacher, (3) her model clinical supervisor. Their selections indicated the similarity in characteristics to the clinical model to be greater than the (perceived) similarity to the academic model. The author feels that the findings indicate a significant socialization value in clinical role modeling and she recommends that the role of the clinical faculty be emphasized.

140.

Jacobson, Margaret Davis. "Effective and Ineffective Behavior of Teachers of Nursing as Determined by their Students." Nursing Research, 15 (Summer, 1966), 218-24.

The study described in this article had two objectives: (1) to relate effectiveness and ineffectiveness of teacher behaviors to factors like motivation of the student to teach, ratio of faculty to students, level of teacher's academic preparation, and the grade level of the student, (2) to compile a list of critical requirements for teachers of nursing.

It was possible to find a relationship between the level of the student and the reporting of ineffective incidents (seniors report more), but other relationships were not established. Six major categories evolved into which the critical incidents could be classified with a high percentage of agreement. These were (1) availability to the students, (2) apparent general knowledge and professional competence, (3) interpersonal relations with students and others, (4) teaching practices in classroom and clinic,

(5) personal characteristics, and (6) evaluation practices. Fifty-eight critical requirements are listed under the six headings.

The study involved collecting 1182 critical incidents of effective and ineffective behavior of teachers of nursing from 961 undergraduate nursing students in five different university schools.

141.

Jensen, Alfred C. "Determining Critical Requirements for Nurses." Nursing Research, 9 (Winter, 1960), 8-11.

This research was conducted by collecting critical incidents from a sample group of 21 nurses enrolled in the author's class. The purpose was to develop a profile of the effective nurse. The respondents were asked to think of a particular person who was ineffective or effective and give illustrative behavior. Eighty critical incidents were collected from which the author constructed a profile of the effective nurse.

142.

Jensen, Alfred C. "Determining Critical Requirements for Teachers." Journal of Experimental Education, 20 (September, 1951), 79-85.

This is a report on an early critical incident study in which 500 critical incidents were collected from teachers, administrators, and teachers in training who were asked to describe effective and ineffective behaviors of elementary and high school teachers. The author describes the portrait of an effective teacher which emerged, organizing the effective teaching behaviors into three categories and listing them individually either as: (1) personal qualities, (2) professional qualities, or (3) social qualities. The full list is included.

143.

Martin, Jane R. Explaining, Understanding, and Teaching. New York: McGraw Hill Book Co., 1970, 248 pp.

The book deals with the philosophy of education and stresses the responsibility of the teacher in choosing his methods of teaching, emphasizing that in order to understand human activity--in order for the learner to adopt the agent's behavior--the students must take the agent's point of view. "The claim being made here--that one educational task is to get students to acquire or make their own certain ways of living, acting, etc.--is neutral...on questions of institutional setting and method" and "on the organization of the curriculum." Thus, the educator is free to choose the way of understanding which he wants his students to achieve: "He has freedom to select and to discard ways of understanding as educational goals...(and) he has freedom to come up with interesting and novel combinations of ways of understanding. His task ...is...potentially creative."

144.

Metz, Robert, and Haring, Olga. "An Apparent Relationship Between the Seniority of Faculty Members and Their Ratings as Bedside Teachers." Journal of Medical Education, 41 (November, 1966), 1057-62.

This article presents an analysis of student evaluations of the teaching effectiveness of 23 clinical faculty members for which ratings were collected over a period of three years. Scores were found to vary inversely with a teacher's seniority (the number of years elapsed since graduation from medical school). The mean scores of teachers who had graduated fewer than 20 years before was 3.76, as compared to 2.86 for those who had graduated more than 20 years earlier--a difference statistically significant at the .01 level. The authors include a discussion of the fallibility of the data, and of possible alternate interpretations that could account for their finding.

145.

Petrusich, Mary Margaret. "Teacher of Teachers: A New Dimension." Peabody Journal of Education, 46 (January, 1969), 211-14.

The author discusses the role of the teacher of future teachers, which is defined as giving students "active, memorable learning experiences." Thus, the teacher must actualize the abstract and synthesize many things into a whole which can be recalled by the student through an assortment of stimuli. Petrusich concludes that a truly great teacher does not need methods courses; rather, he needs the freedom to be creative and to inspire creativity in his students.

146.

Pohl, Margaret L. The Teaching Function of the Nursing Practitioner, 2nd ed. Dubuque, Iowa: W.M.C. Brown Co., 1973, 129 pp.

Providing a general introduction to the field of teaching from a nurse's viewpoint, this book is most concerned with the practitioner teaching patients and co-workers. It discusses general principles of learning and teaching as well as examines informal and structured teaching methods, including teaching through supervision.

147.

Posthuma, Allan B., and Posthuma, Barbara, W. "Effect of Faculty Personality on Occupational Therapy Students." American Journal of Occupational Therapy, 27 (November-December, 1973), 480-83.

The authors hypothesized that students with personality characteristics most like those found in their teachers were the students most likely to achieve academic success. In a study they conducted using a small sample group of students and faculty (20) they found not only that the evidence did not support their hypothesis, but that the reverse was true. From this finding they deduced that students develop individual personality characteristics not influenced by faculty models.

148.

Ramsey, William R. "Role of the Agency Supervisor." Implementing Field Experience Education. Edited by John Duley. New Directions for Higher Education, No. 6, Summer 1974. San Francisco, Calif.: Jossey-Bass, pp. 45-54.

The author presents comprehensive guidelines for defining the role and function of the effective field supervisor. A field study program requires that the agency supervisor be both a supervisor and a teacher to the worker-learner. He must relate the world of work to the world of learning, acting as interpreter. At the same time he must be the administrator who meets the objectives of both the educational institution and the organization to which he is accountable. To meet these demands he must follow certain practices: (1) be specific in planning, (2) participate in recruitment and selection of students for his facility; set student standards, (3) supply necessary support structures for students, (4) orient students quickly and efficiently and define their places in the organization, (5) establish a schedule, (6) interpret experiences with students, and (7) see the program to completion and evaluation. He must remember as well, "The supervisor, whether or not he wishes such a role, becomes a part of the student's image of what it means to become a professional in the world of work."

149.

Schnebly, Martha E. "From Clinician to Educator." American Journal of Occupational Therapy, 24 (July-August, 1970), 329-35.

This article treats the lack of preparation for teaching that exists among educators in occupational therapy, "educators" meaning both academic and clinical faculty members. The author gathered information about this problem from a questionnaire administered to 177 occupational therapy faculty members in 33 different schools.

She found that 4 out of 9 new faculty members for that year had had no prior teaching experience. Sixty percent of the respondents listed teaching as their primary responsibility--and reported that they had acquired their teacing knowledge through a system of trial and error, by imitating former teachers, and through attendance at workshops, seminars, and institutes on education. Some reported experience in practice teaching and apprenticeships.

Schnebly suggests that the responsibiility for teaching clinicians to be educators must be met by the individual with ability, interest and experience; faculty development in the hiring institution; the graduate school in general education; and the continuing education programs in the profession.

150.

Schweer, Jean. Creative Teaching in Clinical Nursing. St. Louis, Mo.: C. V. Mosby Company, 1968, 324 pp.

Schweer urges the clinical nursing educator to be creative and accept the challenge of change. In addition to introducing a variety of teaching approaches and educational media, she stresses the need for clinical teachers to use available time and equipment to their best advantage, so that the students can learn through self-involvement in individually designed learning experiences. The book's four major parts discuss (1) the concept of creativity as the focal point for clinical teaching, (2) the atmosphere which fosters creativity in the teacher and students, (3) the actual clinical teaching in terms of planning, selecting, supervising and evaluating the students' clinical experiences, and (4) the teacher's responsibility to self, profession, and community.

151.

Scully, Rosemary M. "Clinical Teaching of Physical Therapy Students in Clinical Education." Unpublished Ed.D. dissertation, Columbia University, 1974, 177 pp.

Using the grounded theory (in which one uses the data to formulate theory, rather than using data to verify preconceived theory) this study was designed to generate conceptions about what clinical physical therapy teachers do, why they do it, how they feel about it, and what facilitates or restrains them. Categories developed from the retrieved data indicate that clinical teachers view their function as a pacing of students toward professional competency, with the least risk to patient, profession, student and the institution. The clinical teaching situation is defined and the behaviors of clinical teachers are discussed. Scully concludes by suggesting ways this information can be of practical use for clinical education.

152.

Scully, Rosemary M. "The Role of the Coordinator of Clinical Education." Section on Education, Newsletter, American Physical Therapy Association. Spring, 1966, pp. 44-47.

The clinical coordinator should be a faculty member who can devote full time to working with clinical instructors, students, and academic faculty to bring about the best possible cooperative effort between the physical therapy school and the affiliation centers for clinical education. Ms. Scully describes the coordinator's role and responsibilities, the setting, and the objectives of the clinical experience--in a comprehensive examination of clinical education.

153.

Stritter, Frank T.; Hain, Jack D.; and Grimes, David A. "Clinical Teaching Reexamined." Journal of Medical Education, 50 (September, 1975), 876-82.

The authors reported on the findings of a questionnaire survey of medical students at the University of North Carolina at Chapel Hill and the University of Alabama at Birmingham Schools of Medicine, the purpose of which was to determine what faculty teaching behaviors facilitated student learning of clinical medicine. In order of their helpfulness and importance six general teaching dimensions emerged:

(1) Providing a personal learning environment in which the student is an active participant;

(2) Exhibiting positive attitude toward teaching and students;

(3) Concentrating on applied problem-solving rather than factual material;

(4) Using student-centered instructional strategy;

(5) Presenting a humanistic orientation;

(6) Emphasizing references and research (least helpful).

154.

Tyers, Frank O.; Pierce, William S.; and Waldhausen, J. A. "Alternating Periods of Full-Time Clinical and Full-Time Teaching-

Research Responsibility Versus All Things to All People at All Times." Journal of Surgical Research, 16 (February, 1974), 124-30.

The authors present a cogent argument in favor of alternating an academic surgeon's time between periods of clinical practice and periods of teaching-research responsibility. They feel that the insistent demands and responsibilities of patient care in clinical practice preclude any reasonable expectation that the surgeon can simultaneously devote an adequate amount of time to his teaching and research responsibilities; ergo, separate the two areas to allow the teaching surgeon time in which to give his best attention to each.

155.

Worthingham, Catherine. "The Clinical Environment for Basic Physical Therapy Education, 1965-1966: Part II: Staff." Physical Therapy, 48 (December, 1968), 1353-58.

This is the second part of the Worthingham report on clinical environment of basic physical therapy education, presenting a comprehensive description of the clinical staff surveyed in 441 facilities used by 42 schools. All data pertinent to individual teaching and professional experience, and their relationship to the clinical environment, are presented and analyzed.

FOR OTHER ENTRIES *related to clinical faculty see also:*

45, 106, 158, 207, 218, 219, 224, 226, 234, 235, 246, 285, 299, 301, 343, 347, 352, 362, 376, 402, 473, 476, 478, 482, 502, 541, 542, 544, 547.

156.

Adams, William R.; Ham, Thomas Hale; Mawardi, Betty Hosmer; Scali, Henry A.; and Weisman, Russell, Jr. "Research in Self-Education for Clinical Teachers." Journal of Medical Education, 49 (December, 1974), 1166-73.

These researchers conducted an experiment to ascertain whether an 8-week course for clinical teachers would result in discernible changes in the individual teacher's awareness of his teaching style. Five researchers and five instructor-students (physicians) took part. The key to the course was observation: the instructor-student first observed the interaction of preceptor, medical student and patient; then he in turn assumed the preceptor role himself in order to be observed by a course leader. Course participants found excellent teaching value in seeing other preceptors at work and in discussing together their observations.

157.

American Medical Association, Council on Medical Education. Instructor Preparation for the Allied Health Professions and Health Occupations. Task Force on Instructor Preparation, Advisory Committee on Education for the Allied Health Professions and Services, Council on Medical Education, American Medical Association. July 1, 1971, 33 pp.

Noting that allied medical instructors are "educated in terms of core curriculum, career mobility, behavioral objectives, proficiency examinations, microteaching, individualized curriculum and the domains of the learning process," this report is designed to aid prospective instructors and those establishing programs of instructor preparation. It includes a list of schools offering academic programs for instructor preparation, statistical tables, a bibliography, and available grants, as well as descriptions of the programs at ten schools.

158.

Anderson, J.; Gale, Janet; and Tomlinson, R. W. S. "Training of Medical Teachers." Lancet, 2 (September 7, 1974), 566-68.

This article describes the workshop approach of a course offered at King's College Medical School, London, to help medical teachers teach more effectively. The workshops' aims are defined thusly: "(1) To assist the practicing clinical teacher to achieve knowledge and understanding of educational method and the relationship between definition of objectives, methods of evaluation, and teaching methods. (2) To encourage the teacher in those attitudes towards his teaching which will contribute to the aims of students and of medical education."

Working in small groups, the participants perform tasks based on real situations which they have met in their medical schools. All aspects of the educational process are presented and arranged to illustrate their interrelatedness: teaching methods, objectives, psychology of learning, and evaluation. At the end of the course the students plan and make an educational film to illustrate the ideas demonstrated and taught during the workshop. Evaluations are carried out pre- and post-time of the workshop and nine months later.

159.

American Physical Therapy Association, Committee on Continuing Education. Effective Continuing Education--How To. Washington, D.C.: American Physical Therapy Association, 1973.

This pamphlet deals with the problem of "professional obsolescence" and the need for effective continuing education in physical therapy. It is generally accepted that the half-life of medical knowledge is 5-10 years. Consequently it is estimated that the health professional must spend approximately 20 per cent of his working time in continuing education. Eight different symptoms are given from which to make a diagnosis of individual professional obsolescence. The pamphlet presents a step-by-step set of guidelines to follow in planning a program of continuing education. These include information on defining objectives, locating resources, designing learning experiences and methods of presentation, keeping records, developing a budget, and evaluating educational objectives and long-term benefits.

160.

American Physical Therapy Association Committee on Continuing Education. "Guidelines for Continuing Education for Components of the American Physical Therapy Association." Physical Therapy, 52 (April, 1972), 405-07.

Included in this brief article are clear definitions of the principles of continuing education in physical therapy and a descriptive outline of objectives, funding sources, and evaluation n[illegible]s.

161.

Bamford, Joseph C.; Gromisch, Donald S.; Rubin, Samuel H.; Sall, Sanford; and Rous, Stephen N. "A Project to Improve Faculty Performance and Enhance Student Learning." Journal of Medical Education, 45 (September, 1970), 709-10.

This brief article describes a pilot study begun by five medical school faculty members who wanted to determine the feasibility of providing medical school teachers an opportunity to acquire knowledge in medical education. Volunteering to take part in group study sessions and activities which included self-improvement through a group process, development of a teacher evaluation form, and an in-depth study of ward rounds as a student learning experience, each member presented lectures, conducted seminars, and gave demonstrations. Presentations were videotaped. Group members feel their project has been successful. A teacher evaluation program has been instituted, and more faculty members are coming to see the value in understanding basic educational theory. The original volunteers are serving as resource people in their departments as the project expands.

162.

Barker, Ben D. "Administration and Evaluation of Continuing Educational Program." Journal of the American College of Dentists, 36 (July, 1969), 171-78.

Barker, a dental educator and administrator, stresses the necessity for reappraisal of continuing education in dentistry, and urges that specific steps be taken to insure creation of effective continuing education programs: (1) increase the involvement of practitioners in the planning process; (2) clearly define objectives; (3) emphasize quality, by appropriate evaluation of programs; (4) coordinate the efforts of schools, societies and other agencies; and (5) assume professional and financial responsibilities through organized societies.

163.

Beckerman, Marvin M. "Educational Change Agent: A New University Extension Professional Role." Adult Leadership, 21 (June, 1972), 39-41.

The author recommends creating a role of extension educational specialist inside the university, to act as a change agent in designing and initiating new programs within the institution. Suggested for a second role is a specialist to perform as an outside agent for extension education to help define and identify needs of the extension service consumers. The two persons would work together as an inside-outside team.

164.

Borg, W. R. "The Minicourse as a Vehicle for Changing Teacher Behavior: A Three Year Follow-Up Study." Journal of Educational Psychology, 63 (December, 1972), 572-79.

Borg describes the evaluation of a self-instructional package of teacher training materials aimed at developing teaching skills. Teachers who had used the instructional model, referred to as Minicourse #1, were tested immediately after, four months after, and 39 months after they had completed the training, to compare the level of teacher performance on each specific skill covered in Minicourse #1 at each of four checkpoints. In each instance an analysis of variance revealed that on the postcourse evaluation the subjects were significantly above their precourse level on all ten behaviors.

Since March, 1967, the Teacher Education Program, Far West Laboratory for Educational Research and Development, has been concentrating on the development and evaluation of minicourses, an extension of the research on micro-teaching initiated at Stanford University in 1963. The minicourse model consists of an instructional film which describes and illustrates specific teaching skills, a handbook containing "microteach and reteach lessons," and videotape for replay and self-evaluation.

165.

Brown, Clement R., and Uhl, Henry S. M. "Mandatory Continuing Education: Sense or Nonsense?" Journal of the American Medical Association, 213 (September 7, 1970), 1660-68.

The authors believe that mandatory attendance at traditional programs of continuing education for physicians, which they consider inadequate and ineffective, is stifling the development of more adventurous and innovative programs. They urge that continuing education be designed to relate directly to improved patient care. Brown and Uhl suggest a two-fold approach: (1) identify specific deficiencies in patient care in the hospital setting and provide programs for correction; (2) establish communications for consultation between family physicians or community specialists and specialists at university or regional medical centers. To implement the first step they offer the "bicycle" approach to continuing education, which relates the patient care cycle to the education cycle by using the hospital chart audit system of identifying problem areas in patient care. A study of this concept in action at the Chestnut Hill Hospital, Philadelphia, is reported in detail. To solve partially the second, or quantitative, problem in educating physicians they subscribe to the establishment of a consultation communication network, which the authors feel should comprise use of two-way closed circuit TV for consultation, and perhaps in conjunction the use of WATS line telephone service.

166.

Castle, C. H., and Storey, P. B. "Physicians' Needs and Interest in Continuing Medical Education." Journal of the American Medical Association, 206 (October 14, 1968), 611-14.

This article provides a summary of a study conducted in the state of Utah which surveyed medical practitioners to determine needs and to coordinate planning for a continuing medical education program. The authors' conclusions reinforce the belief held by medical educators who advocate that continuing education must come in direct response to the expressed needs of physicians and that physicians must be helped to identify objectively the areas in which continuing education can effectively improve care of their patients.

167.

Connell, Karen J. "Organizing Short-Term Teacher-Training Programmes. Development of Educational Programmes for the Health Professions. Public Health Papers No. 52. Geneva, Switzerland: World Health Organization, 1973, pp. 93-103.

This paper offers guidelines for planning short-term teacher-training programs, making recommendations about staff planning, selection of participants, and program design. Especially helpful is its discussion of the "learning unit" which has been found to be useful for focusing on a specific content area and can be used as the main instructional element in such short-term programs; these instructional packages require the learner to apply the new information or skill to his regular work, and increase the probability of the participants' use of the new knowledge.

168.

Darby, Dean W. "The Dentist and Continuing Education--Attitudes and Motivation." Journal of the American College of Dentists, 36 (July, 1969), 165-70.

This article reports that a survey of dentist implies that practicing dentists feel there is a need for a nationwide coordinated continuing dental education system to provide a sequence of one-to-two-day comprehensive, well-organized programs and courses, flexible enough to meet the diversified needs of the practicing dentist, and mobile and economical enough to provide a practical method of reaching dentists at the community level. It is important that the programs be "planned as a continuum . . . with all elements carefully integrated and under coordinated leadership at all levels." The article describes self-instructional methods presently being developed which lend themselves easily to adaptation in a variety of forms for media presentation. These include programmed instruction utilizing "simulation, problem-solving, case studies, and self-generated group discussion."

169.

Dimond, E. Grey. "National Resources for Continuing Medical Education." Journal of the American Medical Association, 206 (October 14, 1968), 617-20.

The author argues that the Regional Medical Program (RMP) for continuing education is sufficient on the regional level, but that resources and facilities already in existence on the national level must be coordinated with the RMP to establish a nationwide network to involve all physicians in active medical education programs. He suggests that the National Library of Medicine, with its National Medical Audiovisual Center, and the Veterans Administration, with its national graduate medical center (and perhaps an additional one like it), could function at the center of a national program guided by a single advisory faculty. Dimond outlines detailed specifications for the functions and programs of each unit. He speaks plainly about the problems of reaching and stimulating medical practitioners, and about the types of programs which are necessary to provide continuing education of professional quality and lasting value.

170.

Donahue, Robert R. "Regional Cooperation in Continuing Education." South Dakota Journal of Medicine, 27 (February, 1974), 15-18.

This is a report on the plan of the Advisory Committee on Continuing Education of the South Dakota State Medical Association to deal with the necessity of continuing medical education. The Association, recognizing, "With the half life of total medical information estimated at something less than five years, it becomes absolutely imperative then that the physician in any discipline continue to add to his store of knowledge in some formal, systematic manner," devised a plan consisting of (1) a recognition award to support participating physicians; and (2) the establishment of 12 educational centers for post-graduate medical education (in private community hospitals).

It is recognized that an important function of a Health Education Center, as recommended by the Carnegie Commission, is continuing medical education and that the director of medical education can help develop programs, such as hospital monthly seminars and cancer clinics, which will improve health care delivery.

171.

Dryer, Bernard V. "Lifetime Learning for Physicians, A Report from the Joint Study Committee in Continuing Medical Education." Journal of Medical Education, 37, Part 2 (June, 1962), 134 pp.

This is a general article relating to continuing education for physicians. In it the author advocates establishing a national plan to administer a program which would stress the application of practical methods utilizing knowledge and methods from the areas of medical education, the behavioral sciences, and the technology of communication. He gives special attention to the concept of learning as an individual achievement, and consistent with that basic tenet, he urges that the individual's requirements for continuing education be integral with these five criteria of practicality: personal satisfaction; freedom of choice; continuity; accessibility; and convenience.

172.

Foster, Gosalyn. "Here's How In-Service Education Works." Modern Hospital, 115 (October, 1970), 95-98.

The author describes the in-service education program for nurses at Michael Reese Hospital in Chicago where classes are offered once a month in specialized departments. Ideas for the classes are supplied by the staff, who identify specific needs in the various departments. The result is instruction tailored to meet these identified needs, thereby insuring good motivation for learning.

In-service education serves several functions: (1) to provide orientation for all personnel in the nursing department; (2) to teach skills to nurse assistants and other auxiliary nursing staff; (3) to provide continuing education for all nursing personnel; and (4) to develop the leadership capabilities of head nurses, or potential head nurses.

173.

Hiemstra, Roger, and Long, Roger. "Survey of 'Felt' Versus 'Real' Needs of Physical Therapists." Adult Education, 24 (Summer, 1974), 270-79.

The authors report the results of a study on the ability of 100 physical therapists in Nebraska to determine their needs for continuing education. Two types of needs were identified, "real" and "felt." Real need was defined by the answers to a paper-and-pencil test of knowledge and practice or by the choices selected from hypothetical situations which matched their own experiences. Felt need was defined by individual selections of courses in which the physical therapists felt that they would want to participate if given the opportunity. The study confirmed that the physical therapists could identify a variety of needs for continuing education, but that there is a difference between real and felt needs. Statistically, the null hypothesis (i.e. that there is no correlation between the two) was not rejected.

174.

Hightower, Ann B. "Continuing Education in Physical Therapy." Physical Therapy, 53 (January, 1973), 16-24.

Five hundred active physical therapists were surveyed in a questionnaire investigating their current continuing education activities, obstacles to continuing education, and perceived needs for continuing education. Physical therapists in this study spent a mean of 42.11 hours per month on continuing education (but the standard deviation for this figure was 39.92). Their most frequently used methods of study were (1) supervision of students in the clinical setting; (2) contacts with colleagues; (3) demonstrations, ward rounds, clinics; (4) journal reading; and (5) group discussion, inservice education, and study groups. Recommendations included development of TV, videotape, and telephone-TV tieups.

175.

Hospital Research and Educational Trust. Training and Continuing Education: A Handbook for Health Care Institutions. Chicago, Ill.: Hospital Research and Educational Trust, 1970, 261 pp.

This basic handbook for personnel development through training and continuing education within health care institutions describes the techniques involved in developing programs, from needs determination to evaluation. It covers how to make a skill inventory and a survey of learning needs; how to state learning objectives; how to design a specific supervisory development program in a representative hospital situation; how to prepare the instructor's guide (with a detailed plan for program session); how to use teaching tools, such as puzzles, rating scales, and games; how to use the case study, role play, and in-basket exercise; and how to produce and use various types of audiovisual media. There is discussion of both entrance and exit interviews and handling disciplinary situations. A special section is included on the training of nurses' aides, and the work of food service personnel, ward clerks, and housekeepers is analyzed. Numerous illustrations, checklists, exercises, and case studies are included. Most chapters have lists of readings, and there is a bibliography and an index.

This publication gives occasion to call attention to the wealth of authoritative, low or reasonable cost materials available from the American Hospital Association, which can be surveyed by getting the latest "Order Form for AHA Publications," available upon request from AHA, 840 N. Lake Shore Dr., Chicago 60611. Virtually all aspects both of health manpower continuing education and training (except medical education) and all related factors are included. For example, the "Order Form" has sections on "auxiliaries and volunteer service," "careers," "health care delivery," "library service," "medical records," "nursing," "personnel administration," "planning," and "prepayment and utilization." The section on "education and training" includes more than 25 items, including the valuable publications of the Hospital Research and Education Trust. Among these latter are Correspondence Education and the Hospital; Programmed Instruction and the Hospital; and four sets of "basic training programs for food service workers, housekeeping aides, nursing aides, and ward clerks. Now that the American Society for Hospital Education and Training, an affiliate of the AHA, has been established (in 1971), additional materials are being produced. (Fostering the Growing Need to Learn)

176.

Houghton, Celia. "Where Teachers Help Teachers." Teacher, 92 (January, 1975), 55-57.

This is a mini-review of the role and objectives of "teachers' centers" which have been developed around the country. The author cites in particular the Center at Greenwich, Connecticut, which, like others, was established by teachers who were encouraged by the success of summer workshops and felt that they would profit from further sharing their mutual concerns through workshops and seminars. Such centers now number in the hundreds. Programs are designed to include personnel (paraprofessionals, administrators, etc.) at all levels. Communication is initiated with other centers and with area schools and universities, to enrich the programs. Local colleges offer credit to participants in these programs and teachers can get inservice credit. The author assesses the value of the centers in these words, "Teachers' centers will play a key role in educational progress if they encourage confidence in teachers' abilities to make their own solutions and if they bring about recognition and support of teachers as the central figures who must design, implement and support change and development."

177.

Hunter, Elizabeth. The Cooperating Teacher at Work: Case Studies of Critical Incidents. Teacher Education Series. Edited by Margaret Lindsey. New York: Bureau of Publication, Teachers College, Columbia University, 1962, 103 pp.

This book contains 26 case reports describing incidents which involve the cooperating teacher's working relationships with the student teacher and the college teacher. The author developed this case book as a means of stimulating discussion about student teaching in five specific areas related to the cooperating teacher's role: (1) selection of the cooperating teacher; (2) relationship between cooperating teacher and student; (3) relationship between cooperating teacher and his school; (4) evaluation of student by cooperating teacher; and (5) rewarding the cooperating teacher. Questions for discussion are provided at the end of each report.

178.

Jason, Hilliard. "Effective Medical Teachers: Born or Made?" Journal of Medical Education, 38 (January, 1963), 46-47.

In this brief presentation the author offers his opinion that good teachers are made. He argues that teaching is not prized or rewarded enough in the medical fields, and that effective teaching methods need to be identified and communicated to prospective teachers.

179.

Jordheim, Anne. "An Extension Course in Wisconsin." Nursing Outlook, 12 (August, 1964), 45-46.

The author relates her experiences as the instructor of an extension course designed to bring nurses (two-thirds of whom were inactive when they started the course) up to date in their professional knowledge and skills. The course, which had the support and assistance of the University of Wisconsin, was presented in 12 two-hour sessions and used a variety of teaching methods and tools--prepared packets of printed materials, films, exhibits, demonstrations of new equipment and techniques, lectures from outside, role playing, panel and group discussions. Students who desired practical experience could arrange it through a local hospital. The results were excellent. Some of the participants returned to nursing after only a few classes. The class as a whole decided to meet every six months for a continuing review of new trends.

180.

Kerr, Dorothy. "The Most Promising Manpower is the Manpower That's Already There." Modern Hospital, 115 (October, 1970), 90-94.

The author urges better utilization of hospital manpower through development of effective inservice education programs. She cites two primary reasons why hospital programs have been less than effective: (1) those in charge of the programs usually have no background in education; (2) hospitals are reluctant to budget enough money to support inservice education. This article describes the goals of inservice education, the needs of the staff which should be met, and the necessity of providing trained educators to administer an adequate program.

181.

Kidd, James Robbins. Financing Continuing Education. New York: Scarecrow Press, 1962, 209 pp.

Kidd suggests that the problems concerning the financing of continuing education are the same as those of paying for any form of education. Thus, he points out, one must ask (1) how much revenue is needed? (2) how much can the student pay? (3) which forms of financing will not compete with other kinds of education? and (4) will the financing chosen have an ill effect on the quality of the education? He further comments that continuing education ought to be regarded "as the price of well-being or even of survival." Following a discussion of the relationship between corporations and continuing education, the author notes that there are many more sources for support than are presently in use.

182.

Larson, Curtis G. "The Adult Learner, A Review of Recent Research." American Vocational Journal, 45 (September, 1970), 67-68.

The author describes briefly the effect of age on adult intelligence and discusses the motivations of adults to continue with education or to take continuing education courses. Research shows that in general adults who have been out of school fewer than 12 years return for reasons of economics, while those who have been out of school for a longer period return for self-actualization. They learn well what they want to learn, and they do best when they take an active part in the teaching-learning process.

183.

Lewis, Charles E., and Hassanein, Ruth S. "Continuing Medical

Education: An Epidemiologic Evaluation." New England Journal of Medicine, 282 (January 29, 1970), 254-59.

This reports the results of a ten-year study "on the utilization and evaluation of continuing education offered by the University of Kansas." Among the findings were: (1) during 1956-1965, 57 per cent of the 2,090 physicians practicing in Kansas participated in courses of continuing education offered by the State University; (2) half of the recorded courses were taken by seven per cent; (3) internists took the most courses, and participation in metropolitan areas was lowest; (4) unrelated to physician participation were class standing in medical school, maternal and perinatal death rates, and regional rates for certain operative procedures. The authors cite changes they deem necessary to make continuing medical education more effective: (1) involve the physician actively in areas where he has been made aware of his deficiencies; (2) reorganize the pattern of medical practice to relieve the physician's pressure of practice and the cost of the education; (3) periodic relicensing might be required but only after the first two changes have been made. In a letter "To the Editor" in the Journal April 9, 1970, Robert W. Christie, M.D., questioned both the criteria used in the study for determining the effectiveness of continuing medical education and one of the authors' conclusions. He said that "the most valuable means of carrying on continuing education is practical work," and that rather than rearranging the physician's practice, the continuing education programs should be rearranged. (Fostering the Growing Need to Learn)

184.

Marchesini, Erika H. "From Head Nurse to Supervisor." Nursing Outlook, 11 (June, 1963), 421-24.

Ms. Marchesini provides a description of the training she received in an inservice education program in nursing administration to prepare her for a position as a supervisor. The program lasted two years, providing instruction in the manifold problems, skills and opportunities involved in the different areas of a supervisor's responsibility--making rounds, counseling, evaluating, teaching, interpersonal relations, and communication.

185.

Marshall, Minna H. "Inservice Programs Require Effective Follow-Up." Nursing Outlook, 12 (August, 1964), 42-44.

The author, on the inservice education staff of Los Angeles County General Hospital, describes one of the hospital's inservice programs. The program involves a series of four one-day workshops for registered nurses. Each day's workshop focuses on a different aspect of nursing responsibility: planning patient management, ward teaching, planning patient dismissal, and finally, counseling and interviewing. Marshall stresses the importance of effective follow-up, offering suggestions on how to involve nurses in planning the evaluation of inservice programs. She notes that self-discipline must be encouraged so that nurses will continue to perform as instructed, long after follow-up has ended.

186.

McGehee, Edward H.; Clark, James E.; Coppola, Edward D.; Gonnella, Joseph S.; and Levit, Edithe J. "The Philadelphia County Medical Society Self-Evaluation Examination." Journal of Medical Education, 49 (October, 1974), 993-95.

In this self-evaluation study an examination consisting of 100 multiple choice questions was administered to 525 physicians. In a follow-up survey 75 per cent of the participants stated that this self-assessment had resulted in some modification of their behavior in practice. Many said the experience pointed out to them areas of weaknesses in their knowledge or performance and enabled them to identify specific areas of study in which they needed to further their education.

The authors include cost information about conducting their survey.

187.

McGuire, Christine; Harley, Richard E.; Babbott, David; and Butterworth, J. Scott. "Ausculatory Skill: Gain and Retention after Intensive Instruction." Journal of Medical Education, 39 (February, 1964), Special Issue, 120-31.

A continuing education program for practicing physicians who received intensive instruction in ausculatory skill was followed up with a study to evaluate the post-course achievement in gain and retention. The authors hypothesize that periodic reinforcement would be necessary to maintain initial gains. Their evaluation suggested that additional study to test this hypothesis was indicated, and they planned to conduct another program using alternative methods of instruction.

188.

Miller, George E. "Continuing Education For What?" Journal of Medical Education, 42 (April, 1967), 320-26.

Continuing medical education should mean continuing self-education, not continuing instruction--a shift away from preoccupation with courses and methods toward a concern for educational diagnosis and individualized therapy. Continuing education should lead practitioners to a study of what they do, to an identification of their own educational deficits, and to the establishment of realistic priorities for their own educational programs. One means of accomplishing this is to delineate the health needs of the population served by a practitioner or hospital staff, perhaps by weighting three variables: disease incidence; individual disability produced by these diseases; and social disruption, or the degree to which illness affects the family and related social units. Once health needs have been determined, an inventory of available resources can be developed. If it becomes clear that little can influence the outcome of a frequently encountered problem, educational attention can be directed to other things about which something can be done, while research continues on problems remaining to be solved. Practitioners also need to be involved in an analysis of their use of the available resources. (Fostering the Growing Need to Learn)

189.

Miller, James G. "Computer-Based and Computer-Planned Continuing Medical Education for the Future." Journal of the American Medical Association, 206 (October 14, 1968), 621-24.

Miller reports in this article on the developing electronic networks of information processing which have become ever more important to the availability and quality of continuing education in medicine. He cites three major programs: EDUCOM (open to all disciplines); (2) REMEDIAL (Regional Medical Dial System); and (3) EDUNET (more encompassing than EDUCOM). He reports that a subtask force on continuing education in the health sciences is working on applications of new technologies, while the entire task force is working on a computer network program of self-testing for health sciences professionals. This latter network of on-line terminals would provide an opportunity for an individual to test himself (privately and at his convenience) to identify his own strengths and weaknesses. If he wished to correct any void in his current knowledge he could then elect to receive (over the network) documents, programmed instruction, television, or other educational aids or materials.

190.

Pascasio, Anne. "Continuing Education for Quality Health Care." Physical Therapy, 49 (March, 1969), 257-64.

The author describes the dimensions of continuing education and reviews familiar methods. The emphasis in this article is on the need to engage more allied health personnel in cooperative efforts in continuing education (not only for the purpose of acquiring skills and knowledge of practice but also for learning interpersonal skills). Dr. Pascasio cites a recommendation of the Committee for Continuing Education for the Health Professions, in 1966, that programs be built based on inquiry into patient care in which several professions are involved: "When the goal is learning to work together, the process of study itself constitutes the educational program." There is support for the belief that the focus of coordinated and effective health care continuing education should be patient-centered and that continuing education will have to include education of the patient himself.

191.

Petty, Thomas L.; Neff, Thomas A.; Neff, Louise M.; and Tyler, Martha L. "A Program for Community Training in Respiratory Care." Chest, 64 (November, 1973), 636-40.

The program described in this article utilized members of the division of pulmonary medicine in a medical center as well as the full complement of facilities available in the center and the existing facilities at the community hospitals in the area. Before the program began a questionnaire survey was made of all the area hospitals to establish the level of respiratory care. Based on these findings, and in response to requests from the community hospitals, the program provided "circuit riders" during the first year who presented new ideas through slide demonstrations. From this the program moved on to encompass 3-5 day workshops, annual courses which attracted up to 300 physicians from all over the nation and overseas, community hospital in-house instruction for development of comprehensive respiratory care programs, and the development of a visual aid library serving a two-state region. The program resulted in a marked change in the number of respiratory care services available in all of the hospitals replying to the original questionnaire.

192.

Pirnie, F. Anne. "Why, What and How of Inservice Education." Nursing Outlook, 12 (January, 1964), 47-51.

The author describes an inservice education program for nurses at the University of California Medical Center, where she was assistant director of inservice education. Her article draws heavily from Knowles' Handbook of Adult Education in the U.S. She cites the compelling demands for expansion of inservice education, e.g., the rapid changes and advances in hospital nursing, in technology, and in professional specialization. In developing programs to meet the learning needs of the staff she suggests a list of objectives which incorporates enlisting the participation of staff in planning and carrying out the system of evaluation. She concludes with two questions the program director should consider in judging the success of an inservice program--Will the program directly or indirectly result in improved patient care? Is the program valuable enough to justify taking nurses away from patients?

193.

Porreca, Anthony G., and Sleeman, Phillip J. "The Adult Learner: Learning Ability Versus the Media." Journal of Continuing Education and Training, 1 (May, 1972), 301-08.

In the study described in this article students with different reading, listening and mental abilities and socioeconomic backgrounds were taught economic concepts. One group used an overhead projector and a second group used programmed textbooks. Findings were significant beyond the .05 level: (1) post-test achievement and retention of principles were greater with the programmed textbook; (2) a higher degree of retention of basic concept understanding occurred with the use of the overhead projector; (3) students with high reading, comprehension, and listening abilities achieved more in both cases than those with low abilities in these areas.

194.

Reynolds, Helen E., and Drake, J. C. "8 Years as Director of Inservice Education." Nursing Outlook, 11 (February, 1963), 98-101.

These authors drew on their experience at the Research Hospital, Kansas City, to enumerate detailed aims, objectives, and goals of inservice education. They relate specific suggestions for administering an inservice education program to their general philosophy, and present a checklist of nine recommendations, reminding the inservice director that the real criterion for evaluating an inservice program is whether it is contributing, directly or indirectly, to improved patient care.

195.

Ritvo, Miriam M. "Human Relations Training for Supervisory Personnel in Hospitals." Nursing Forum, 2 (No. 3, 1963), 98-112.

This article presents an inservice hospital training program which focuses on the quality of interpersonal relations in supervisory positions, a program designed to improve the effectiveness of both the individual supervisor and the group in which he functions. Participants are encouraged to learn about group dynamics, to build new values, and to experiment with new ways of thinking and behaving. The program, which Ms. Ritvo conducted for 32 different hospitals, took the form of a seminar, in which she tried to change the way supervisory personnel interpret hospital experiences and problems and to help them develop the extra vision and insight their jobs require. She worked with groups of about 15 supervisory personnel in two-hour meetings which took place once a week for a period of 15 weeks. She describes her teaching plan and methods. In conclusion she offers evidence that the program has been well received and that it possesses the capability to produce lasting effects beneficial to the participants.

196.

Rogers, Jennifer. Adults Learning. New York: Penguin, 1971, 222 pp.

This book suggests methods and materials from which teachers of adults can choose. Whereas the first half of the book is "about adult students: who they are, what brings them to classes, how they feel in a classroom, how they react to different teaching techniques, how they learn most easily, how they behave in groups, and with what sorts of teachers and teaching methods they are likely to feel happiest," the second half of the book is "about the practicalities: the advantages and disadvantages of carrying out particular teaching strategies such as 'discovery learning,' programmed instruction, case studies or projects. These chapters also deal with problems such as the planning of resources, finding ways of giving individual attention to students in classes of widely spaced ability, and creating active, lively methods of learning."

197.

Shaw, Jane. "Community Resources Aid Inservice Education Budget and Help Provide Diversity of Courses." Modern Hospital, 119 (November, 1972), 97-99.

The author discusses the inservice training program at the University of Chicago hospitals, where hospital officials have capitalized on the availability of community resources to enhance the hospitals' own inservice capabilities. The program taps sources such as the Chicago Board of Education, local junior colleges, and federal and state agencies. By cultivating these relationships outside the hospitals it is felt that employees benefit from the diversity of contributors to the program, while at the same time the hospitals' burden of responsibility and cost can be significantly reduced.

198.

Squire, Lucy Frank. "On the Training of Teachers in Preparation and Presentation of Radiological Material." Radiology, 110 (January, 1974), 105-108.

This study advocates the establishment of teacher-training programs for the teaching of radiology in medical schools. In order to assist the beginning teachers it suggests assigning a senior radiologist to oversee and advise the apprentices in a basic course of instruction. This would include guidance in classroom presence, classroom attitudes and relationships with students, and the how-to's of choosing teaching material.

199.

Stein, Leonard S. "Adult Learning Principles: The Individual Curriculum and Nursing Leadership." Journal of Continuing Education in Nursing, 2 (November-December, 1971), 7-13.

Stein presents two major principles of adult education: (1) adults who want to learn will learn; (2) adult educators evoke learning responses and arrange learning opportunities. Dr. Stein uses these two principles to develop eight items for consideration in the development of adult education programs. These items include (1) learner should be aware of his capabilities; (2) previous learning affects new learning; (3) need for motivation; (4) effective use of learning skills; (5) the adult's decline in physical powers; (6) stress reduces adult learning; (7) age tends to reduce acceptance of new viewpoints; and (8) the learning process must contribute to various goals.

200.

Storey, Patrick B.; Williamson, John W.; and Castle, C. Hilmon. Continuing Medical Education: A New Emphasis. Chicago, Ill.: American Medical Association, 1968, 128 pp.

This book stresses that continuing medical education must relate to improving clinical practice. The authors point out that the objective of improved patient care must be carefully defined, so that there will be: (1) criteria of high quality care; (2) a way of measuring whether or not these criteria have been met by the results of a physician's practice; (3) a method for analyzing the clinical process that has failed to measure up to the desired criteria; (4) a method for upgrading the physician whose clinical process does not meet the desired criteria; and (5) an evaluation of the method used to upgrade the physician. Active participation in the program of the "physician-learners" is encouraged.

201.

Swansburg, Russell C. "A Design for an Inservice Education Program." Nursing Outlook, 13 (March, 1965), 40-42.

Swansburg's article addresses the necessity for inservice education programs for Air Force nurses. Borrowing from other sources, and quoting an earlier article in Nursing Outlook, by F. Anne Pirnie (January, 1964, pp. 47-51), he describes a design--foundation, framework, structure and maintenance--for building an inservice education program. He fashions an acronym on which to hang the program's requirement--SOLOs, or statements of learning objectives. Based on these SOLOs he provides a detailed outline of the methods by which to fulfill the objectives. His program includes testing of participants on their knowledge of current journals and other reference materials, debates, panel discussions, presentations by consultants, lectures, discussions and even games.

202.

U.S. Department of Health, Education,and Welfare, Public Health Service, Health Resources Administration. Fostering the Growing Need to Learn. Rockville, Md.: Division of Regional Medical Programs, Bureau of Health Resources Development, 1974, 160 pp.

An abstract of this book's content reads as follows:

"Fostering the Growing Need to Learn is a critical study of continuing education activities by leaders in health manpower education and adult learning. The series of monographs and /440 item/ annotated bibliography are intended to aid decision makers in the health care field in developing and utilizing health manpower to improve the quality of health care.

This reference guide analyzes and proposes approaches to continuing education and enables decision makers to avoid traditional pitfalls, advance successful efforts, and encourage sound innovations."

Fostering the Growing Need to Learn was produced by the Project Continuing Education for Health Manpower performed by Syracuse University pursuant to Contract No. HSM 110-71-147 with the Public Health Service, Department of Health, Education and Welfare.

203.

Verner, Coolie, and Davison, Catherine V. Psychological Factors in Adult Learning and Instruction. Florida State University Department of Adult Education, Research Information Processing

Center, Tallahassee, Florida, 1971, 30 pp.

This monograph is a review of basic psychological principles related to adult learning. It was written as a companion piece to another by these authors in the same series, entitled Physiological Factors in Adult Learning and Instruction. The chapter on designing and managing instruction receives the authors' fullest attention; other chapters deal with "the stages and conditions of learning and instruction" and "remembering and forgetting." It includes eleven references for additional study.

204.

Watts, Nancy T. "What Can a Physical Therapist Learn from Practical Experience?" Progress in Physical Therapy. Proceedings of the World Confederation of Physiotherapy. London, England, 1970, pp. 106-117.

The author hoped with this paper to provoke much-needed research on the factors in day-to-day practice influencing professional competence of the physical therapist. In general, the effects of practical experience can be measured by comparing increases in competence (cognitive, affective, motor) with losses or decreases in competence that occur after graduation and separation from the up-to-date knowledge, skills practice, and supervision of the clinical education environment. In a survey of professional clinical teachers, the importance of continuing contact with students was found to be the most significant single factor affecting the professional competence of practicing therapists. Without this contact increases in competence developed on the job tended to be diminished after three to four years.

205.

Williamson, John W. "Priorities in Patient-Care Research and Continuing Medical Education." Journal of the American Medical Association, 204 (April 22, 1968), 303-08.

This article reports on a study undertaken to establish a priority list of patients' medical conditions from which to define areas of patient care in which research, education, or both, could be most rewarding. Six top-ranking disease categories were identified which "revealed areas of educational needs ranging from those where little instructional effort seemed warranted to those where immediate action seemed indicated." After three years the study was judged to have important implications for continuing education for physicians. The author details how organizing a central education committee and coordinating efforts to implement this approach can result in involving the greatest possible number of physicians, as well as other health care team members, in evaluating medical care and participating in educational programs to improve patient care research.

206.

Williamson, John W.; Alexander, Marshall; and Miller, George E. "Continuing Education and Patient Care Research." Journal of the American Medical Association, 201 (September 18, 1967), 938-42.

The authors are physicians addressing other physicians on the related topics of continuing education and patient care research. Their study reveals a number of basic findings: (1) that continuing education and patient care research are complementary; (2) that deficiencies in patient care are due to "multiple determinates"; (3) that "in the evaluation of educational effectiveness, measurement of what physicians actually do is more important than recording what they claim they should do"; (4) that sometimes nonverbal educational stimuli are more effective than information and logic in improving behavior; (5) as "educational effects are often short-lived, a continuing cyclic effort seems essential if desired levels of performance are to be achieved and maintained."

207.

World Health Organization. "Training and Preparation of Teachers for Schools of Medicine and of Allied Health Sciences: Report of a WHO Study Group." WHO Technical Report Series 521. Geneva, Switzerland: World Health Organization, 1973, 1-32.

This report treats the present needs of the health field for trained teachers of medicine and allied health sciences. The study group which prepared this WHO Technical Report agreed that while there is no proof that teacher training programs make better teachers, a case can easily be made in support of providing some background in "educational science" to health educators. There is a challenge from educators and students alike to reevaluate the old ways of teacher preparation, and there is evidence that deficiencies exist in numbers of trained health professionals and in education practices. This report identifies the types of teachers who need teacher training programs (health professions teachers, educational specialists, educational leaders, and teachers who train teachers). A teacher training program is described and a plan for staffing is outlined.

FOR OTHER ENTRIES related to clinical faculty continuing education see also:

45, 136, 503, 506, 508, 512.

Clinical Education Process

208.

Adams, William R. "The Psychiatrist in an Ambulatory Clerkship for Comprehensive Medical Care in a New Curriculum." Journal of Medical Education, 33 (March, 1958), 211-20.

This article describes a psychiatric clerkship for teaching comprehensive care which focuses on the group clinic as the center of the curriculum. Through the clinical experience the student/psychiatrist learns that he cannot isolate the emotional health of his patients from their other health problems. In the clinic setting the student-teacher relationship can be used to fullest advantage, the student's activities and interests are at their peak, and the student's undesirable defenses can be identified and more carefully handled.

209.

Allen, Rebecca. "A Student's Summary of Clinical Experience." Section on Education, Newsletter, American Physical Therapy Association, Fall, 1967, pp. 39-40.

Writing from her experience as a student, Ms. Allen selected the clinical teaching techniques she recommends--basically, a balance of clinical practice and lectures (the lectures to serve as review of old or introduction of new material). She suggests plenty of repetition in skills practice, and advocates independence in patient treatment planning and practice, emphasizing at the same time the need for adequate supervision and supportive criticism by clinical instructors. She points out the value of students' encoutering as many disorders and types of patients as possible, but stresses the necessity to avoid fleeting encounters and to allow sufficient time for establishing treatment goals.

210.

American Physical Therapy Association, Office of Vocational Rehabilitation. Clinical Education for Physical Therapy. Proceedings of the Annual Institute. Norman, Okla., April 16-21, 1961. New York: American Physical Therapy Association, 1961, 126 pp.

Among the papers presented at this Institute were Beatrice F. Schulz's classic article on "Developing Objectives for Physical Therapy Education," and Susanne Hirt's "The Importance of Clinical Education," which stresses that the clinical experience should provide maximum opportunity for developing confidence and self-understanding as well as competency in skills. This document also contains Wilbur Moen's "Survey Report," which reveals that students and graduates all want "more opportunity and guidance during clinical affiliations." In addition to the panel discussion moderated by Barbara White ("What Should Be Accomplished During a Program of Clinical Experience?") and two articles on the advantages and disadvantages to a clinical facility providing a program of clinical education, other articles include discussions on planning programs for clinical education and the relationship between the educational institution and the affiliating clinical facility.

211.

American Physical Therapy Association, Vocational Rehabilitation Administration. Learning Experiences in Physical Therapy Education. Proceedings of the Annual Institute. Norman, Okla., April 18-22, 1966. New York: American Physical Therapy Association, 1966, 208 pp.

This Institute dealt with learning, and these proceedings contain articles such as "Predicting the Effectiveness of Learning Experiences" by Watts and "The Cognitive Domain in Learning" by Gonnella. Of particular interest is Watts' "The Affective Domain in Learning" which stresses that students see themselves as their teachers see them, and points out instructional methods for teaching in the affective domain. Also included are summaries of workshops on planning experiences for cognitive, affective and motor learning.

212.

Andrew, Barbara J. "An Approach to the Construction of Simulated Exercises in Clinical Problem Solving." Journal of Medical Education, 47 (December, 1972), 952-58.

The author proposes a problem-solving model for use in medical clinical teaching. She describes fully the characteristics that should be provided in the model for accurate simulation of clinical cases and discusses all the learning features and components of such a teaching technique. The student engaged in this simulated exercise participates step-by-step in patient care from description of a patient and his complaints, through diagnostic work-up and management of therapy, to follow-up of the patient after treatment.

213.

Barrows, H. S. Problem-Based Learning in Medicine: Rationale and Methods. Education Monograph 4, Faculty of Medicine, McMaster University, Ontario, Canada, 1973, 63 pp.

This monograph introduces the philosophy of problem-based learning and offers models of methodologies developed for medicine. Included are examples of the problem-solving method applied to both simulated and real patients. Stressing that problem-based learning is appropriate at any level of education, the author notes that whereas it first consists of close supervision while the student acquires basic skills and facts, it later progresses into unsupervised responsibility of patient management and leads to continued study on the postgraduate level.

214.

Bendall, Eve. "The Learning Process in Student Nurses—2--Some Problems and Variables." Nursing Times, 67, Supplement (November 4, 1971), 173-77.

This is a report of a specific investigation, designed to study three variables: "(1) that in terms of learning as measured by attainment test scores, there will be no difference in mean scores of groups having theory first or practice first in a given area; (2) that in the same terms, groups having theory and practice in an area within a short time of each other will score significantly more than those having a long time between, irrespective of the order; (3) that the educational level of students will make no difference in this context."

The results of the study indicated that the first hypothesis is true, but that theory followed by practice within a short time interval produced superior results. There was some confirmation of the second hypothesis, that the time interval between theory and practice is important. A short time interval increased learning efficiency. The third hypothesis could not be tested.

215.

Bing, Robert K. "Requisites for Relevance: Changing Concepts in Occupational Therapy." Annals of the New York Academy of Sciences, 166 (December 31, 1969), 1020-26.

The author identifies and discusses the following three requisites for relevance in occupational therapy and occupational therapy education: (1) a solution to the contradictions in the changing design of our health care systems and the utilization of personnel; (2) a realignment of levels of education and training; and (3) comprehensive, cooperative continuing education.

Bing presents a design for a two-year associate degree certification-of-proficiency program for occupational therapy assistants, offered as an experimental program in Galveston, Texas, through a cooperative effort by Galveston College and the University of Texas Medical Branch. He describes in full the primary objectives of the program, as well as the program's academic and clinical structure. The program was designed to follow four study tracks--general education, basic health-oriented sciences, associated health occupation's core education, and individualized clinical education assignments--with strong emphasis on a health team concept throughout.

216.

Bloom, Benjamin S. "Learning for Mastery." Evaluation Comment, 1 (May, 1968), 1-12.

This describes a general approach to education and evaluation which stresses the importance of individual potential for learning. Basic to this approach is the premise that any student can conceivably attain mastery of a learning task if he is given enough time. Bloom espouses a system in which a student working in a small learning group is allowed to set his own pace, provided tutorial help where possible, and judged by level of performance rather than in relation to other students. Testing is frequent, always with full understanding of learning objectives and criteria for judgment by learner and teacher. The accent is on building the student's confidence, providing him the best learning resources, and ultimately, giving him recognition of his individual achievement.

217.

Brackett, Mary. "Hospital Nursing Service--A Practice Field for Nursing Students." Nursing Outlook, 8 (October, 1960), 557-59.

This is a general discussion of the conflict between nursing schools and nursing services which arises out of the difference in their goals: the school of nursing exists to teach students; the nursing service exists to care for patients. The author cites the need for each to make known its own philosophy, aims, and objectives and to work independently of the other. Briefly, the schools should not exploit the head nurses by using them to provide all the instruction, and the nursing services should not exploit the students by using them to compensate for understaffing.

218.

Brown, Amy Frances. Clinical Instruction. Philadelphia, Pa.: W. B. Saunders Co., 1949, 571 pp.

Having been expanded upon by the author in her 1960 edition Curriculum Development, this book is not as useful as the latter one. However, it includes models of certain test devices which are useful in evaluating clinical learning experiences and makes helpful suggestions about the evaluations of the clinical student and of the clinical teaching program itself.

219.

Brown, Amy Frances. Curriculum Development. Philadelphia, Pa.: W. B. Saunders Co., 1960, 851 pp.

Concerned with the development of nursing curriculum and relying heavily on Tyler, this book provides a detailed examination of the principles of curriculum planning and evaluation. It also discusses methods of clinical instruction and the inservice education of inexperienced ward instructors, as well as the planning of clinical rotation and the orientation of students to a facility. The book is a revision and expansion of the author's 1949 publication, Clinical Instruction.

220.

Brown, Reynold F.; Burnett, Bruce M.; Margulis, Alexander R.; Jones, Malcolm D.; and Ross, Steven E. "The Concept, Design, and Operation of a Radiological Health Science Education Unit." Radiology, 100 (July, 1971), 79-83.

The radiological education unit described by these authors consists of a classroom and laboratory with machines, where examinations are simulated. Also developed and described is the use of "learning files," designed like self-instructional packages, for teaching radiological physics and diagnostic interpretations. Education offered in this unit is to augment, not replace, clinical education.

221.

Bucca, Josephine T. "Clinical Education at the University of Maryland." Section on Education, Newsletter, American Physical Therapy Association, Fall, 1967, pp. 36-38.

In accord with findings of a study which surveyed retention of interest in subject fields by beginning students in institutions of higher learning, this program was designed at the University of Maryland to nurture the students' interest throughout the four-year physical therapy program. Objectives are outlined separately for each year of instruction with emphasis on student involvement at the earliest opportunity. It is believed that the freshman and sophomore response to clinical instruction is especially important to whether students maintain interest in the physical therapy program.

222.

Burnside, I. M. "Peer Supervision: A Method of Teaching." Journal of Nursing Education, 10 (November, 1971), 15-22.

The author, acting as overseer, organized eight students in the last quarter of their M.A. nursing studies to supervise each other in a program to test the efficacy of peer supervision. She records her success with this dual-role method of teacher training. The student's individual experience as student and as supervisor, together with the evaluation comments received from the supervisor/overseer, combined to help the group define a list of objectives for the roles they were preparing to fill as teachers.

223.

Butler, Helen F. "Education for the Professions: Student Role Stress." American Journal of Occupational Therapy, 26 (November-December, 1972), 399-404.

Students in the clinical environment are subject to greater anxiety and tension than employed therapists. Clinical students have a greater morale problem than academic students. The author makes specific recommendations to foster better understanding between students and clinical faculty in order to create a less pressurized environment for learning.

224.

Butrov, Valerie N. "The Education of Medical Personnel in the USSR." American Journal of Public Health, 64 (February, 1974), 149-54.

In the USSR the Ministry of Health directs and coordinates medical education with the activities of the state health care system. Medical education is divided into two areas: training of physicians (future and inservice) and training of auxiliary personnel in the health field (the latter category includes pharmacists, dentists, obstetricians and others). The facilities, medical education schools supplemented by curato-preventive establishments (bases for practical training), serve both groups.

Educators are strong proponents of improving methods to integrate teaching of theoretical and practical subjects. Overall, the system heavily emphasizes keeping abreast of both technical advances in teaching and technological and scientific advances in medicine through periodic continuing education for teachers of medical education, for practicing physicians and for auxiliary personnel.

225.

Callahan, Mary E.; Addoms, Elizabeth C.; and Schulz, Beatrice F. "Objectives of Basic Physical Therapy Education." Physical Therapy Review, 41 (November, 1961), 795-97.

The objectives presented here were spelled out in the proceedings of the Council of Physical Therapy School Directors held in Chapel Hill, North Carolina. The Council's aim was to express in more detailed terms the general definitions which describe the areas of responsibility of the practicing physical therapist. The five major categories of physical therapy educational objectives are service to the patient, education of self and others, management of a therapeutic clinic, establishment and maintenance of good interpersonal relationships, and continued growth and development. With these for a base, the Council developed the following expanded list of objectives (for further development at a later time) and a discussion of each: (1) competency in practice of physical therapy; (2) growth and development--personality characteristics; (3) art of communication; (4) professional development; (5) human relations; (6) social conscience and consciousness; (7) management and administration; and (8) personal health.

226.

Callahan, Mary E.; Decker, Ruby; Hirt, Susanne; and Tappan, Frances, eds. Physical Therapy Education: Theory and Practice. Washington, D.C.: Council of Physical Therapy School Directors, American Physical Therapy Association, 1968, 102 pp.

This document reviews the philosophy of physical therapy education, the design of objectives, learning experiences and evaluation procedures, as well as teaching. Designed to offer suggestions "to teachers as well as those responsible for developing a curriculum in physical therapy," the various chapters describe the determination of objectives, the selection and design of learning experiences to meet these objectives, and the development of evaluation processes to determine if objectives have been accomplished. Although the work emphasizes classroom education, the authors also deal with clinical education, noting that its goals are "to assist the student: to correlate clinical practices with basic sciences; to acquire new knowledges, attitudes and skills; to develop ability to observe, to evaluate, to develop realistic goals and plan effective treatment programs; to accept professional responsibility; to maintain a spirit of inquiry and develop a pattern for continuing education."

227.

Carrol, John B. "A Model of School Learning." Teachers College Record, 64 (May, 1963), 723-33.

This article presents a conceptual model which probably contains all elements accounting for success or failure in school learning (exclusive of attitudinal and emotional elements). The author separates factors present in the individual, namely, aptitude, ability and perseverance from factors present in conditions external to the individual, namely, opportunity and quality of instruction.

228.

Christman, Luther. "Education of the Health Team." Journal of the American Medical Association, 213 (July 13, 1970), 284-85.

Christman wants health educators to focus their attention on the changing social scene and its implications for change in the delivery of health care. He feels strongly that the working relationships between the health professions, long based on territorial imperatives, must give way to a willingness to collaborate and share values and objectives. He suggests that more should be done to arrange shared learning experiences for health professionals, during their basic years of preparation and in the ensuing years when continuing education programs should emphasize the team concept. Christman proposes models of care constructed to fill the needs of the patients and based on a strategy of cooperation between participating health team members. Each discipline's skills and competencies would be brought together to carry patients through the periods of diagnosis, treatment, and rehabilitation. In this article he considers the benefits to health education and to patient care that would result.

229.

Clemen, Sara J. "A Model for Educating Supportive Personnel: The Dietetic Technician." Journal of the American Dietetic Association, 64 (April, 1974), 401-05.

The author addresses the subject of paraprofessional education--in this instance the training of dietetic technicians--and provides in the process a useful model for the training of allied health personnel at all levels. She describes a program designed at Pennsylvania State University within the Food Service and Housing Administration Program. Its chief objective is to provide a program which will interrelate operation and subject matter in such a way that the "modern work-while-studying student" can effectively and competently translate theoretical knowledge to the demanding situations in the health care facility. Emphasis is on career mobility and communication among the three levels of dietetic personnel. The educational model utilizes a seminar-practicum combining a 15-hour-a-week work experience, self-instructional modules, and a 2 1/2-hour weekly seminar. The author provides a full description of what these components comprise, how they are coordinated, and some of the problems which are encountered in implementing this less conventional teaching model.

230.

Cogan, Morris L. Clinical Supervision. Boston, Mass.: Houghton Mifflin Co., 1973, 236 pp.

This book is about how to make in-class supervision of school teachers most effective in accomplishing improvements in the teachers' classroom instruction. Of particular interest are Chapter iii, which stresses the importance of the supervisor's knowledge of his own patterns of perception and the use of self-knowledge in forming judgments, and Chapter xiv, which discusses how to plan and carry out conferences between the supervisor and the supervisee.

231.

Cogland, Shirley. "A Method of Clinical Education--Simmons College." Section on Education, Newsletter, American Physical Therapy Association, Spring, 1966, pp. 43-44.

The method of clinical education reported by this author emphasizes the value of continuity in clinical instruction. The program's four and a half years of instruction are supervised by a single faculty of physical therapists who teach the students in both the classroom and the clinic. The feasibility of this program hinges upon the proximity of the clinical facilities to the school, so that faculty members are able to move readily between the two, and upon keeping class size small, so that instruction is individualized.

232.

Coleman, James S.; Livingston, Samuel A.; Fennessey, Gail M.; et al. "The Hopkins Games Program: Conclusions from Seven Years of Research." Educational Researcher, 2 (August, 1973), 3-7.

After describing the two types of learning processes--"experiential" and "information-processing"--and pointing out the weaknesses of each, the authors present the results of the study they conducted of simulation games as learning methods. Their conclusions reveal that the most effective change in attitude is produced when the simulation game follows a format with a well-defined procedure and explicit identification roles. Other elements affecting the efficacy of game-playing include the amount of time spent playing the game and the degree to which players employ knowledge or skills related to attitudes and/or behaviors.

233.

Connelly, Tom, Jr. "Kentucky January--One More Approach to Interdisciplinary Education." Health Team News, 1, No. 7, February 1, 1975.

This is a brief description of a clinical education program used at the University of Kentucky in the project called "Kentucky January." Six or seven students in their final semester of clinical education are placed as a team in the "real world" of a local community for three weeks of on-the-job health care delivery. Foremost in value to the student is his introduction to the concept of teamwork, the rationale for which he learns while experiencing the responsibilities and opportunities teamwork affords. He enters the community program with defined goals, but without formal instruction to guide his interdisciplinary activity. In evaluating this program after two years the developers feel that the nursing and medical technology students involved have learned to interact more effectively. They also cite the fact that approximately 12 students have returned to their Kentucky January sites for employment.

234.

Connelly, Tom, Jr. "The Translation of Teaching Models into Methodology." Journal of Allied Health, 4 (Winter, 1975), 46-49.

This is one in a series of articles by Connelly which describe the community health project called "Kentucky January" initiated by the University of Kentucky and developed as a training program for allied health students. He cites three important points for health educators to consider in translating the models of their program into methodology:

(1) The timing of teaching the model concept should be synchronized as closely as possible with the students' field experience.

(2) The faculty should receive a technical training program on teaching and translating model concepts.

(3) The students should be required to complete a "paper-pen" project showing the application of model concepts to their real life experiences.

235.

Coppernoll, Penny S., and Davies, Dean F. "Goal-Oriented Evaluation of Teaching Methods by Medical Students and Faculty." Journal of Medical Education, 49 (May, 1974), 424-30.

The authors describe a questionnaire survey of randomly selected third- and sixth-term students and faculty members at the University of Tennessee Medical School (60 of each). The study was designed to determine the ratings given to nine different teaching methods for developing specific student competencies, and to compare the ratings of the students with those of the faculty. The teaching methods included clerkship, lectures, self-instruction, studying old tests, conferences, laboratory instruction, independent study, class notes, and seminars. The competencies for the student included the development of proficiencies in six categories: (1) communication; (2) factual knowledge; (3) problem solving; (4) laboratory and clinical skills; (5) initiative; and (6) professional behavior. The findings indicated that traditional methods of instruction were rated lower by both faculty and students than were less traditional methods. The highest overall rating went to the clerkship method. Independent study and self-instruction also had high ratings. The correlation of responses from students and faculty was fairly high.

236.

Coppola, Edward, and Gonnella, Joseph A. "Nondirective Approach to Clinical Instruction [illegible] Medical School." Journal of the American Medical Association, 205 (August 12, 1968), 487-91.

This article outlines results and implications of a clinical teaching experiment. Volunteer students in a surgery clerkship engaged in a one-hour-per-week discussion group for which the students chose the topic. The instructor then posted a list of pertinent references, and the students met (without the clinical instructor) in a tape recorded symposium on the topic. The tapes were monitored for errors in factual information or omissions of pertinent material and then a discussion was held with the instructor present to supervise. At the end of the clerkship students who participated in the experimental discussions performed similarly on the comprehensive examination to those who had not participated in the seminar session. Equally indicative of the favorable results, they elected to continue the symposium on their own time because of the personal stimulation and benefits they experienced.

The implication is that clinical education designed to foster academic independence instills attitudes and learning skills valuable not only in clinical education but in continuing education after medical training is completed as well.

237.

Cosh, Patricia. "The Demands of Modern Physical Therapy on Physical Therapy Curricula." Progress in Physical Therapy, 1 (No. 3, 1970), 249-53.

The author discusses the necessity for physical therapy educators to utilize modern educational theory and aids in undergraduate curricula, to integrate preclinical and clinical education effectively, and to assume responsibility for developing adequate postgraduate curricula and research. Cosh stresses that excellence at all levels is essential to the professional survival of physical therapists as full complementary members of the medical team. Her article presents an excellent summary of the ideal for physical therapy clinical education.

238.

Council of Physical Therapy School Directors. Development of Objectives, Learning Experiences, and Evaluation Procedures for Courses in Physical Therapy. Proceedings of the Annual Institute. Madison, Wis., November 6-10, 1961, 288 pp.

At this Institute, with the help of consultants Christine McGuire and Dr. Laurence Fisher, participants were engaged in setting objectives, planning learning experiences, and figuring out ways of evaluating a program of education for a unit on ambulation. The basic educational principles involved are very simple, but the reader might find the specific suggestions for the unit on ambulation helpful as illustrations. There is a lot of emphasis on the clinical experience of working with gait problems. This Institute was intended to serve as a model for faculty development, and much of the work of the Institute took place in study groups.

239.

Crosby, Marion H. "The Status of Patient Contact as an Experience in the Preparation of Teachers of Nursing in the Area of Specialization, Nursing of Children." Unpublished Ph.D. dissertation, Teachers College, Columbia University, 1968.

Ms. Crosby gives a brief history of the trends in nursing and medical clinical education. The modern emphasis of health care delivery on out-of-hospital nursing requires changes from the training that in an earlier time was almost entirely hospital-based. The author calls for more individualization in planning a student's learning experiences. She also raises the question of selecting the best time for field work and recommends concurrent academic and clinical education with a portion of the clinical education following the academic phase of the curriculum.

240.

Cuban, Larry. "Teacher and Community." Harvard Educational Review, 39 (Spring, 1969), 253-72.

A summary of the article states: "Though there are many reasons for the current gulfs which separate school, community, and teacher-training institutions in the inner city, this paper suggests that a limited view of teaching and an inappropriate training model may be primarily at fault. A tripartite teaching role involving instruction, curriculum development, and community involvement, is described by the author as an alternative, and he outlines a school-based training project in Washington, D.C. operating on this conception."

241.

Cuming, M. W. "Management by Objectives." Physiotherapy, 58 (May, 1972), 161-63.

The author espouses the management concept based on objectives rather than a traditional concept built on the existence and acceptance of managerial authority. Cuming describes management by objectives as that which solicits the cooperation and commitment of subordinates and concentrates on improving the measurable results expected of each individual worker. To bring about this effort toward individual achievement he presents a set of four guidelines: (1) clarify the broad requirements of the job; (2) establish specific "targets" for a limited period; (3) provide supervision and guidance during the target period; and (4) provide an appraisal of the results.

242.

Day, Donna J. "A Systems Diagram for Teaching Treatment Planning." American Journal of Occupational Therapy, 27 (July-August, 1973), 239-43.

The systems diagram described in this article outlines a step-by-step detailed treatment plan leading to the goal of final rehabilitation of the individual patient. The plan functions as a means of communication between clinical supervisor and student, as well as a teaching tool for treatment planning.

243.

Denson, J. S., and Abrahamson, Stephen. "A Computer-Controlled Patient Simulator." Journal of the American Medical Association, 208 (April 21, 1969), 504-08.

The authors describe the features and functions of the computer-controlled manikin called "Sim One," the patient simulator designed to assist in the instruction of medical students, interns and residents. This "simulated patient looks like a living person, 'breathes' with chest and abdomen, has carotid and temporal pulses synchronous with an audible heartbeat, and can be ventilated by bag and mask or through an endotracheal airway. . . . Each maneuver of the student and each response of the simulated patient are recorded and available in typed and graphic form for immediate reinforcement of the learning experience." Such a learning device allows a student to learn at his own rate, moving from simple skills to the more complex, while affording his supervisors a saving in time as well as ample opportunity to assay the student's performance from the print-out. The access to the print-out at any point in the student's training provides the instructor with an accurate and objective evaluation of progress. The simulator also makes possible time and motion studies of virtually all the manual treatments and skills involved in patient care. All of these benefits are possible without in any way discomforting or inconveniencing live patients.

244.

Deuschle, Kurt W.; Bosch, Samuel J.; Banta, H. David; and Dana, Bess. "The Community Medicine Clerkship: A Learner-Centered Program." Journal of Medical Education, 47 (December, 1972), 931-38.

This article explores an innovative program designed as a medical clerkship at Mount Sinai School of Medicine, where the faculty introduced community medicine, in contrast to clinical medicine, as an academic discipline. A format is followed which allows the student to choose from three primary areas of community service. He has the responsibility from the outset of his six-week clerkship to participate in the building of his own program and to specify his own objectives. Meeting frequently with his assigned tutor and other faculty and students in a small group--all of whom work together under a faculty coordinator--each student's progress is followed closely.

Although all community health programs are not developed enough to support the systematic assignment of students, there is evidence that students are well received in the community. Their impact on health programs has produced positive developments, and most importantly, large numbers of students are involved in the process of change.

245.

Deuschle, Kurt W., and Eberson, Fredrick. "Community Medicine Comes of Age." Journal of Medical Education, 43 (December, 1968), 1229-37.

This article reviews a program developed through the Department of Community Medicine at the University of Kentucky College of Medicine. The program involves using communities as field laboratories. It is intended to expand the interest of medical students from the traditional doctor-patient relationship to a practice based on awareness of medical and social problems of people previously beyond the reach of established health care programs. Though originally designed to teach undergraduate medical students, the program has grown to include residents and fellows, in a variety of educational projects. Field professorships have been established as full-time academic positions at the community level to provide teaching, research, and service, and to correlate the needs of the community with the teaching objectives of the medical center. The state system of community colleges provides students the opportunity to obtain the first two years of health training. The authors present a comprehensive examination of the advantages and disadvantages to be considered in administering this program, and an assessment of the gains to be derived for continuing education, community health programs, and the community college system, as well as for the participating physician trainees.

246.

Dickinson, Ruth; Dervitz, Hyman L.; and Meida, Helen M. Handbook for Physical Therapy Teachers. New York: American Physical Therapy Association, 1967, 303 pp.

This valuable handbook was a direct outgrowth of the APTA-VRA Institutes held annually between 1958 and 1967. There is a brief introductory section which touches upon program locale, program facilities, and program phases in physical therapy education, as well as the preparation and responsibilities of the physical therapy educator; but the major focus is on the educational process in physical therapy, with particular emphasis on principles which apply to the clinical education phase. General educational principles concerned with developing objectives, establishing criteria, planning effective learning experiences, and constructing measurement devices are discussed. Criteria, learning experiences, and measurement devices are developed for sample objectives and suggestions for planning learning experiences are outlined.

247.

Dickinson, Ruth; Freeman, Alice; and Peteet, Jean. What's the Connection? Goals-->Learning Activities-->and Back Again. Washington, D.C.: National Institute of Health, Public Health Service, Department of Health, Education and Welfare. June, 1973, 102 pp.

This publication focuses on the importance of effective clinical education in physical therapy, urging educators to relate planned learning experiences more directly to educational objectives. The authors cite the need for close analysis of the methods and principles of clinical education, iterate the necessity for students to be apprised of the specified goals of their clinical experience, and offer a full set of guidelines for objectives, criteria and evaluation.

Included is the description of an evaluation instrument for rating objectives of clinical education, and a detailed report on its use at each of seven different clinical facilities. The objectives are organized under two comprehensive categories: (1) professional adjustment, administration, and teaching; and (2) patient treatment.

To plan programs with the capability of fulfilling the objectives a number of important criteria for designing effective learning activities are enumerated. The section on effective learning activities also includes illuminating comments made by students on their particular clinical experiences as well as comments from clinical educators on their rewards and frustrations as instructors. Actual lesson plans are reproduced to aid clinical educators.

A final section on the bases for evaluating clinical performance offers a discussion of defining the essential and measurable elements of abstract goals and a list of the behaviors essential to the achievement of the objectives on the aforementioned evaluation instrument.

248.

Duley, John. "Cross Cultural Field Study." Implementing Field Experience Education. Edited by John Duley. New Directions for Higher Education, No. 6, Summer 1974. San Francisco, Calif.: Jossey-Bass, pp. 13-22.

This article describes in detail the four-year program leading to a bachelor of arts degree in liberal education at the Justin Morrill College of Michigan State University. The program, designed "to help students become effective and humane autonomous learners," stresses the student's personal involvement and responsibility in the designing of his education, and utilizes a distinctive field study program.

Three types of field experiences are defined: (1) cross-cultural learning; (2) pre-professional experience; or (3) social action involvement. Skills the field study program is designed to develop in the students include (1) information gathering; (2) cultural understanding; (3) listening, speaking, and non-verbal communication; (4) commitments to persons and relationships; (5) decision making; (6) self-understanding; (7) self-reliance; and (8) written communication.

A one-day field experience and a preparation seminar of five to six weeks preceded the term off campus. The student is instructed in John Flanagan's "Critical Incident Technique," a procedure for describing incidents in his field study experience.

249.

Duncan, Burris, and Kempe, C. Henry. "Joint Education of Medical Students and Allied Health Personnel." American Journal of Diseases of Children, 116 (November, 1968), 499-504.

This article is based on a paper presented at the 1968 meeting of the American Pediatric Society, "Symposium II--Introducing the Medical Student to Future Forms of Medical Care of Children." The authors strongly recommend that medical educators provide the opportunity for physicians to acquire awareness of the social and psychological factors which influence an individual's health and to recognize the contributions which other health professionals make to the delivery of health care. They want to see the concept "Students who learn together, work together" translated into a core curriculum for allied health students, into joint seminars for the various health professions, and into field work and training exercises outside the medical center (in the patient's setting rather than the hospital setting) to teach teams of multidisciplinary students. Their article includes a discussion of the problems of coordinating educational efforts in the health professions and some of the solutions they propose.

250.

Dussault, Gilles. "The Development of a Middle-Range Theory of Supervision in Teacher Education Programs." Unpublished Ph.D. dissertation, Columbia University, 1969, Dissertation Abstracts 31, 3386-A.

This study presents a theory of the teaching function of supervision in teacher education, which is based on Carl R. Rogers' theory of therapy and personality change. The middle-range theory predicts that 22 variables in the supervisee's personality and behavior will be changed if five conditions are met throughout the laboratory experience. Also included are a review of the literature and research on the teaching function of teacher education supervision from 1931 through 1968.

251.

Eichenberger, Ralph W., and Gloor, Robert F. "A Team Approach to Learning Community Health." Journal of Medical Education, 44 (August, 1969), 655-62.

This article traces the development of a program initiated at the University of Kentucky School of Allied Health Professions which offered an orientation course in community health to students of allied health and health related professions. Classes were organized into small groups--five senior students in physical therapy, one in dental hygiene, one graduate student in clinical nutrition, and one student in administration. The course, supervised by faculty members from different departments but coordinated by one individual, consisted of 14 weeks of a one-hour lecture and two two-hour seminars each week to teach theoretical considerations of community health. Practical experience was gained during a final three weeks of full-time field study which was coordinated with a senior medical student's community clerkship. The authors include an informal evaluation of the program and offer some short-term conclusions.

252.

Etten, John F. "Flexible Programming in Student Teacher Preparation." Peabody Journal of Education, 46 (January, 1969), 215-17.

The author recommends that freshman, sophomore, and junior students, not only seniors, be assigned to schools for practice student teaching, and that the assignments be made according to the individual student's level of ability and responsibility. Etten cites studies which indicate that student teachers benefit from being members of teaching teams and that students exposed to the classroom early in their education perform better during their senior student teaching. Flexible programs, in which there are many options open to the student, are suggested.

253.

Felton, Jean Spencer. "The Clinical Touch in Teaching: Exploring Human Resources." Physical Therapy, 47 (April, 1967), 285-88.

The teaching-learning or interview-teaching style of instruction is a technique used in physical therapy education to explore human resources within the framework of an unstructured, spontaneous interview whose participants are an instructor, a physically disabled invitee who is the subject, and students. The role of the student is multiple: he is learner, listener, participator, and evaluator. Described by one student as an "ice breaker," the interview is sometimes a physical therapy student's first encounter with a handicapped person. The encounter affords him the opportunity to experience a sense of the relativity of health as well as to learn skills of interviewing.

254.

Field, Michael. "Student Growth and the Clinical Teacher." Journal of Dental Education, 35 (May, 1971), 306-07.

The author's observations about how to create a climate for student growth in the environment of a dental clinic apply with equal usefulness to clinical settings in general. In the main he stresses that the relationship between teacher and student must be based on mutual respect, and that the teacher's responsibility is to foster an awareness within the student that he is free to communicate, learn, and develop his capabilities as a unique individual. He warns against overemphasis of instrumentation and technical procedures.

255.

Fisher, Norma, and Harden, Robert. "Length of Clinical Affiliation: A Discussion." Section on Education, Newsletter, American Physical Therapy Association, Spring, 1967, pp. 22-26.

The discussion centers on the important period of time designated for a physical therapy student's supervised practice in the clinical affiliation. The authors present arguments for clinical placements lasting six months or three months. Supporting the longer clinical training period, Robert Harden contends that three months is not enough time for the student to "acquire, learn, accept, recognize . . ." physical therapy skills. He favors a six-month clinical program to include a broad range of associations, with experience in: a cerebral palsy center, general hospital, specialty hospital, rehabilitation center, private practice, infirmary and outpatient clinic, public health department, home health program, and athletic training program.

On the other hand Ms. Fisher suggests that students in a clinical program of six months duration are saturated and uncomfortable in their continuing student role. She contends that three to four months in the clinical affiliation is sufficient if the time is well-organized and judiciously spent. Supervisors favor four to six weeks of full-time clinical experience, she says, and feel that students approach their highest level of comprehension in that period of time.

256.

Fruchtl, Martin Mary. "New Curriculum Design in Medical Technology Education." American Journal of Medical Technology, 34 (October, 1968), 601-12.

The author presents a curriculum for medical technologists which replaces the traditional 12-month block of clinical experience (coming after three years of course work) with a study-work curriculum consisting of a four-year course of study combined with nine months (three summers) of actual work in a clinical facility outside the university hospital. The author suggests that nine months of externship takes the student out of the classroom and into a medical environment at intervals, assists the student financially, staggers his science courses, alleviates the cost of training for the affiliated hospitals, and does away with what some teaching-technologists in the affiliating hospitals feel is a burdensome and unremunerative teaching chore. She offers for consideration these and other advantages, strongly recommending that laboratory experience in an outside clinical facility under supervision of certified technologists is of benefit to both students and faculty.

257.

Gage, N. L. "Theories of Teaching." Theories of Learning and Instruction. Edited by Ernest R. Hilgard. Chicago, Ill.:

University of Chicago Press, 1964, 430 pp.

Noting that learning theories become more useful when they are transformed into teaching theories, the author of the study described in this chapter examined ways in which teaching theories could be formulated. Conclusions of the study indicate that many different teaching theories are necessary to describe how teachers cause students to learn; furthermore, approaches used in developing teaching theory will influence research. The author notes that already three research movements have been classified according to three families of teaching theory: cognitive structure theories, identification theories, and conditioning theories.

258.

Gagné, Robert M. The Conditions of Learning, 2nd ed. New York: Holt, Rinehart and Winston, 1970, 407 pp.

The author identifies and analyzes eight types of learning: signal learning, stimulus-response learning, chaining, verbal association, discrimination learning, concept learning, rule learning, and problem-solving. He describes the conditions under which these types can be built into a hierarchy of learning, the more complex ones resting solidly upon the more basic; he describes how, conversely, in the teaching and learning of the more complex activities, one can deduce, or infer, the preconditions. The last chapter, "Resources for Learning," applies all this to communication in instruction, media for instruction, designing instruction using media, and modes of instruction. (Fostering the Growing Need to Learn)

259.

Gagné, Robert M. "Educational Technology and the Learning Process." Educational Research, 3 (January, 1974), 3-8.

The author surveys educational technology, "a body of technical knowledge about the systematic design and conduct of education, based upon scientific research." This scientific approach to learning requires that categories of "learning outcomes" be defined (verbal, intellectual, cognitive, attitudinal or affective, and motor), and the appropriate type of instruction be chosen to effect the specific desired learning outcome. Learning processes, or phases of instruction, are described as (1) introductory phase, (2) initial guidance, (3) application, and (4) feedback. A diagram is presented to illustrate the theory of information processing as it applies to learning and memory. The article concludes with a discussion of how media can be effectively utilized in instruction.

260.

Galeener, Janet T. "Providing More Meaningful Clinical Experiences Through Group or Multiple Student Assignment." Journal of Nursing Education, 5 (April, 1966), 29-31.

The author suggests that the difficulty in providing enough patients in any single unit who demonstrate nursing care problems concurrent with the subject content of nursing students' classroom studies can be overcome by making group assignments for clinical teaching. As an additional incentive for considering multiple assignments, she cites the problem presented by the increasing numbers of students assigned to each instructor. Her article describes a system designed to allow two, three, four or more students to provide nursing care for a single patient, and outlines the specific functions involved in the roles of both student and instructor. The main disadvantage as Galeener sees it, that the nursing student would never see the patient as a whole, can be minimized if the instructor offers appropriate guidance.

261.

Gershen, Jay A., and Handelman, Stanley L. "Role-Playing as an Educational Technique in Dentistry." Journal of Dental Education, 38 (August, 1974), 451-55.

The role-playing described in this article was performed in a pilot study to evaluate the feasibility of utilizing role-playing as a technique in teaching behavioral sciences and communication skills in the areas of dentist-patient and inter-team relationships. Sessions were designed in which students assumed roles assigned to them in "personality profile sheets" and enacted situations which were predetermined and described in "situation sheets." (Examples of these sheets are included.) The structure of the program included an evaluation. The results were inconclusive, the authors reporting that the evaluation consisted of an informal subjective appraisal, which was favorable, but that more work is needed to determine the value of role-playing.

262.

Gill, A. Ann; Clark, Joy A.; Hendrickson, F. René; and Mason, Claire L. "A Student Practicum Experience." American Journal of Occupational Therapy, 28 (May-June, 1974), 284-87.

The authors describe a student practicum experience designed to offer occupational therapy students the challenge of finding a role for occupational therapy in an environment where a program had not already existed. Since there were no predetermined guidelines, the students' assignment was to define the role of the occupational therapist in the situation (it was a camp for diabetic children), establish objectives, and plan and implement the program. The students were successful in their endeavor (within the limitations of their experience and the conditions of operation) and the experience was considered valuable.

263.

Gloor, Robert F., and Eichenberger, Ralph W. "Team Learning in Community Medicine for Medical and Paramedical Students." Public Health Reports, 85 (June, 1970), 558-61.

These authors report on a community health experimental project which was sponsored by the University of Kentucky's Medical Center. The experiment, based on the health team concept, placed four teams of students of allied health sciences in a community, to work with four medical students who were already in the community engaged in their senior clerkships. (Medical students worked three weeks prior to the team's arrival and worked an additional three weeks with the team.) Team members represented the fields of medicine, physical therapy, clinical nutrition, pharmacy, nursing, social work and behavioral science. They held frequent meetings to discuss their work, which included visiting families, talking with local practitioners and conducting a specified research project. An evaluation of the team approach showed that the presence of the team leader, i.e. the medical student, was essential to the functioning of the team. The article includes some discussion of the benefits to participants in team work, and makes recommendations about planning team learning projects.

264.

Goroll, Allan H.; Stoeckle, John D.; and Lazare, Aaron. "Teaching the Clinical Interview: An Experiment with First-Year Students." Journal of Medical Education, 49 (October, 1974), 957-62.

The authors advocate early teaching of clinical interviewing skills to medical students. They describe an experiment in which ambulatory patients in an outpatient clinic served as the subjects for patient interviews conducted by first-year medical students. The authors felt the results showed that the interviews could be effectively carried out without compromising the care of the patients. However, they caution, "Outpatient units will require some organization if they are to provide both service and education."

265.

Griffin, Gerald J.; Kinsinger, Robert E.; and Pitman, Avis J. Clinical Nursing Instruction by Television. New York: Department of Nursing Education, Bureau of Publications, Teachers College, Columbia University, 1965, 79 pp.

This book describes an experimental program in the Department of Nursing at Bronx Community College of the City University of New York in which clinical instruction of nursing students was offered on closed circuit TV. Patients who agreed to participate in the program allowed the installation of television sets in their rooms to send sound and pictures of nursing students' performance to a clinical instructor in a monitoring room. The purpose of the program was to test the use of the TV teaching method as a solution to the problem of how an existing number of nursing instructors could teach an increasing number of students without compromising the quality of instruction or expanding the clinical facilities. After the experiment, which took place between 1962 and 1964, the instructors reported that under optimum conditions TV could more than double the number of students existing nursing facilities could teach, and they felt that the quality of instruction was actually improved. The nursing instructors advocated refinement of the TV method of instruction and its adoption on a national basis.

266.

Grimes, David A.; Stritter, Frank T.; Flair, Merrel D.; and Hendricks, Charles H. "A Residency Elective in Medical Education: A Pilot Venture." Journal of Medical Education, 50 (April, 1975), 365-70.

It is generally recognized that much of a medical resident's time in the clinical setting (approximately 20 to 25 per cent of his work week) is spent in teaching and supervising, but that residents are rarely trained to be teachers. This pilot study was undertaken to explore the subject of preparation for potential careers in academic medicine and medical student teaching, and to design a three-month residency elective in medical education. Objectives of teaching and precepting were identified and materials were developed (four different units of self-instructional tape/slide presentations). The authors present guidelines for establishing such a residency, and describe the benefits to be derived by the resident.

267.

Hamilton, James W. "Some Aspects of Learning, Supervision, and Identity Formation in the Psychiatric Residency." Psychiatric

Quarterly, 45 (No. 3, 1971), 410-22.

This article, devoted to suggestions for improving working conditions for residents in psychiatry, makes recommendations that might be applied to other clinical education programs as well. Suggestions to supervisors include how they can create effective separate learning units, organize study groups, offer an opportunity for students to learn by observing supervisors, create an environment that allows for openness and recognizes the inevitability of anxieties, and provide time for informal exchanges between staff and residents.

268.

Harless, William G.; Drennon, Gary G.; Marxer, John J.; Root, Judith A.; and Miller, George E. "CASE: A Computer Aided Simulation of the Clinical Encounter." Journal of Medical Education, 46 (May, 1971), 443-48.

The computer aided instruction described affords the medical student an opportunity to experience simulations of physician-patient encounters in the clinic. After the student has recorded his decisions for diagnosis and treatment he receives feedback from the computer with which to evaluate his own performance. One form of feedback offered to him is a computer solution to his problem, sometimes a different solution from his own. He also receives efficiency and proficiency scores and a printed copy of the interactive session. A library of CASEs is being developed.

269.

Harrell, George T. "Rural and Small Town Practice: Future Training and Role of the Family Physician." Journal of the American Medical Association, 209 (July 21, 1969), 399-402.

This article offers suggestions for special programs to meet the crisis in medical care delivery in rural areas. Dr. Harrell advocates the development of regional hospitals with mobile unit health teams; he suggests a period of compulsory health care service for young people between the ages of 18 and 35; he stresses the necessity of providing rural physicians with instantaneous and adequate communication with consultants. He feels that since physicians' training is hospital-based, physicians in rural medicine need the familiar association with a hospital support system. Dr. Harrell describes a program in the Department of Family Medicine, College of Medicine, Pennsylvania State University, designed as an alternative to a required clerkship. Each medical student receives an assignment on the first day of the first year of school to attend a family with at least four members (one member having a chronic illness requiring continuing care) whom the student will follow and observe throughout his four years of school. He is given increasing responsibility as the level of his training permits. Another program is described, at Hershey Medical Center, Pennsylvania, where second-year students are required to do an original problem-solving project. The author also recommends a medical center experience for postgraduate training programs to keep the family physician up to date in his clinical skills and theoretical knowledge, and for informal continuing education programs employing self-instructional devices.

270.

Hazard, William R. The Tutorial and Clinical Program of Teacher Education; A Study of Teacher Education, in Cooperation with the Carnegie Corporation of New York. Evanston, Ill.: Northwestern University Press, 1967, 71 pp.

Describing the Tutorial and Clinical Program at Northwestern University which replaces general education courses with actual teaching, this report discusses the organization and staffing of the planning phase, the staffing for operations, the program itself and its students, the research and evaluation design, procedures, and techniques, as well as the future directions in program development. A basic concept of the program is that of cooperation, characterized by the partnerships in responsibility between different departments of the university, between the university and the schools, and between the university and other institutions and foundations with which ideas can be exchanged.

271.

Heap, Mildred F. "Use of the Case Study Method in Teaching Management." Physical Therapy, 50 (June, 1970), 831-38.

In the survey reported in this article over 50 physical therapists responded that their education had not prepared them adequately to meet the responsibilities of practice management. The author provides a discussion of the case study method of management which is designed to help the student apply principles of management. To deal with the actual problems of each case the physical therapist learns to identify the key problems, select the pertinent facts of the case, analyze these facts, construct some solutions, select the most plausible answer, and evaluate the decision. This individual case study then is examined in the broader context of: significant health trends in all health fields, community health care, professional services within the physical therapy department and in other departments or areas. Budget planning and the handling of financial resources are another aspect of management responsibility included in the case study method.

272.

Henderson, Algo D. "Innovations in Educating for the Professions." Educational Record, 49 (Summer, 1968), 290-97.

The author reviews the curricular innovations taking place as the professional schools adapt to the changing needs of society. Along with systematic inquiries into existing knowledge, the thrust of the change is to make new curricula more relevant. This is done by linking together theory and practice, and by teaching the student problem-solving techniques he can use in both campus and community experience. Field experiences such as clerkships serve to introduce the student to professional practice environment and also to make him socially aware of the problems that confront his profession. In short, professional schools are moving in new and responsive directions as educators update their thinking about good teaching and learning.

273.

Hill, William Fawcett. "Democratization of the Instructional Program." American Journal of Occupational Therapy, 27 (April, 1973), 127-31.

This article is condensed from Dr. Hill's book, Learning Through Discussion. An abstract at the beginning of the article describes the teaching method he espouses as follows:

"Learning Through Discussion (LTD) applies the techniques and concepts of group dynamics and group development to the classroom. Specifically it is aimed at democratizing the learning process through the utilization of the discussion group but with a difference . . . that LTD discussion is not only designed to provide growth experiences but also to accomplish the goal of content mastery. The LTD method has three major components. One, the group cognitive map is introduced by the instructor and is a program of nine logical steps through which the discussion should traverse to cover the assignment efficiently and maximize the learning. Second is the leader and member roles that must be acted on if a successful learning-discussion group is to emerge. Third is a set of criteria that must be developed and applied which delineates what must take place for learning to be optimized. The proper activation of all three factors will result in an exciting small group experience in which real and long-lasting learnings about the subject matter will obtain."

274.

Hiss, Roland G., and Peirce, John C. "A Strategy for Developing Educational Objectives in Medicine: Problem-Solving Skills." Journal of Medical Education, 49 (July, 1974), 660-65.

The authors deal with a method for developing two types of objectives in medical education: enabling objectives and performance objectives. The "enabling objectives" describe the background the student must acquire in order to attain the "performance objectives." The latter are the problem-solving skills upon which the student's ability to diagnose and treat patient problems is based.

275.

Holcomb, J. David, and Garner, Arthur E. Improving Teaching in Medical Schools. Springfield, Ill.: Charles C. Thomas, 1973, 225 pp.

These authors have developed a handbook for development of behavioral objectives and teaching methods. The lengthiest treatment is given to teaching methods: lecture, discussion, independent study and self-instructional materials. For each of these there is a selected review of pertinent research and a discussion of the techniques it uses. A section on methods for the evaluation of students and instruction concludes the book.

276.

Holding, D. H. Principles of Training. Oxford: Pergamon Press, 1965, 156 pp.

This book surveys results of recent research on training (primarily skill performance and product oriented), both in Britain and the United States. Chapters deal with various aspects of the theory of learning skilled tasks, discussing topics such as kinds of feedback, visual and verbal guidance, and the conditions of practice. Holding points out that the trainer must carefully analyze the task to be learned, find out the factors affecting the learning of the particular skill involved, and arrange the supply of information to the learner in the most effective manner.

277.

Hoover, Loretta W., and Moore, Ainee N. "'Dietetic Com-Pak': An Educational Model Simulating Computer Assisted Dietetics." Journal of the American Dietetic Association, 64 (May, 1974), 500-04.

This article reports on the use of an educational model which can simulate complex computer applications, to teach competence related to computer-assisted food systems management. It includes a full technical description of the simulator. Worthy of mention, perhaps, is the fact that use of such a model can permit simulated computer instruction at institutions which otherwise might not be able to provide the computer learning experience.

278.

Kent, Thomas H., and Spivey, Bruce E. "Lecture Versus Nonlecture in Teaching Gastrointestinal Pathology." Journal of Medical Education, 46 (June, 1971), 525-31.

From a random selection of students in the sophomore class of the University of Iowa Medical College the students in one group received instruction which consisted of lectures plus laboratory sessions while the other group received instruction only by laboratory sessions. In a test given at the end of the course the lecture group scored higher. However, in a test given two months after completion of the course both groups scored poorly, with the group which had received the lectures scoring slightly better than the nonlecture group.

279.

King, Thomas C.; Maxwell, J. Gary; Richards, Ralph C.; Stevens, Laurence E.; and Reemtsma, Keith. "Research in Undergraduate Surgical Education: Innovation and Evaluation." Journal of Medical Education, 43 (March, 1968), Special Issue, 373-82.

This article describes an experimental approach to clinical education which was tested and evaluated in a surgical clerkship designed to focus on three critical elements. These were (1) sharing with the student the planning and responsibility for his clinical experience; (2) accepting the fact of individual variation, and difference in fulfillment needs, of each student; and (3) developing, above all, the student's problem-solving skills. Students in this experimental program, given a more responsible role in determining their objectives and developing their skills, reacted in a positive and productive way. Faculty response was enthusiastic. The authors present in detail the evaluation of the program, and the results of comparisons made between students in this program and those in the previous year's non-experimental program. Students in the experimental program requested a new grading system, one which they felt better reflected the learner-oriented approach of their clinic experience, and one which guaranteed that no student could be failed without having first been apprised of the reasons why his work was unsatisfactory.

280.

Knoepfil, Isobel. "Clinical Affiliation and the Case Study." Section on Education, Newsletter, American Physical Therapy Association, Spring, 1966, pp. 38-41.

Physical therapy schools usually require students or clinical affiliations to prepare case reports. This author calls for expanding the routine case report from what is sometimes an exercise in "busy work" to a vehicle of broad educational benefit to student and supervisor alike. She believes the case study could be expanded in scope to develop both the student's communication skills and his technical training.

281.

Knowles, Malcolm. The Adult Learner: A Neglected Species. Houston, Texas: Gulf Publishing Co., Book Publishing Division, 1973, 197 pp.

This useful book explores various learning theories in depth, giving an overview of a large number of theories, both mechanistic and organismic. The author contrasts learning theories based on studies of animals and children with theories based on studies of adults, including theories of psychotherapy. He discusses an andragogical theory of learning in some detail, appearing to favor its use as a basis for adult education. Andragogy is differentiated from pedagogy by its recognition of the fact that the learner decreases in dependency and helplessness as he increases in age. There is a discussion of principles, concepts, and theories of teaching which also deals with the role of the teacher, including teaching through modeling. A final chapter is devoted to the application of theories of learning and teaching to human resource development. The book contains appendices about Skinner, behavioral paradigms, differential psychology, lifelong education, the role of training in organizational development, and ways of learning (reactive versus proactive).

282.

Krause, Robert L., and Spann, James F. "New Dimensions in Cardiovascular Education. Application of Electronic Technology to Teaching and Testing." American Journal of Cardiology, 32 (September 7, 1973), 335-40.

This article describes an electronic and television teaching facility, which is capable of transmitting sound, pulse, and visual data from patients to as many as 300 students at a time. This system can be used for classroom teaching or self-instruction on all educational levels. Experience with this method in a single academic year demonstrates that it is capable of enhancing the learning of clinical skills, increasing student-patient contact time, and evaluating the clinical skills of entire classes.

283.

Lambertsen, Eleanor C. Education for Nursing Leadership. Philadelphia, Pa.: J. B. Lippincott Co., 1958, 197 pp.

The purpose of this book is "to identify principles of professional education and to identify learning experiences on the basis of these principles, which will facilitate the development of competency in the functions of leadership in nursing practice." Stressing that learning does not necessarily occur "because the learner is exposed to an environment for a period of time and repeatedly performs isolated activities," the author notes that learning experiences should be selected on the basis of the student's ability to become increasingly competent and self-directive. In order to encourage the development of the main objective of clinical education--the "ability to evaluate and implement theory" of nursing practice--the author proposes that learning experiences be planned, so as to develop intellectual as well as manipulative skills. Thus, daily seminars and conferences (following practical experience) aid the student in developing his skills in observing and identifying the patient's needs and problems, while case studies assure that the student can directly apply the principles of nursing to concrete situations. Since in the beginning of clinical experience the student has trouble resolving conflicts between the theories of nursing care and actual practice, and because it is at this stage that the student adopts the values and attitudes of the professional role, the student should be exposed to only highly competent nursing care. It is hoped that, as the student progresses, "she realizes her preparation is not meant to encourage the current practice, but, rather, give her the background in order to improve current practice."

284.

Lind, Amy I. "An Exploratory Study of Predictive Factors for Success in the Clinical Affiliation Experience." American Journal of Occupational Therapy, 24 (April, 1970), 222-26.

At the time of this study, a review of the literature relating to selection of students in nursing, physical therapy, and occupational therapy revealed that there was no battery of tests which effectively predicted success in clinical or hospital practice. The author chose to explore the possibility of predicting success in clinical occupational therapy by using grade point average and/or the following instruments: Allport-Vernon-Lindzey Study of Values, Edwards Personal Preference Schedule, and the Strong Vocational Interest Blank. The scores on these instruments were compared to the students' scores on the Report on Performance in Student Affiliation (supervisor rating). Taking into account the variables in the number of weeks spent in the clinical setting, the differences in raters, and the small number of graduates and undergraduates in the study, predictive equations were found for each diagnostic area of occupational therapy (general medicine and surgery, pediatrics, psychiatry, etc.). It was found that a student's grade point average was the best single predictor.

The author had the following recommendations: (1) define the role and function of occupational therapy in the total treatment program; (2) effect the accreditation of clinical affiliation centers, to promote and maintain standards of education; (3) investigate instruments other than those used in this study; (4) establish a grade point average higher than that of the university as a whole as requirement for admission to clinical affiliation.

285.

Lindsey, Margaret, and Associates. Inquiry into Teaching Behavior of Supervisors in Teacher Education Laboratories. New York: Teachers College Press, Columbia University, 1969, 272 pp.

This monograph, which is the first in a series of three, examines "the current and predicted nature of professional laboratory experiences in the education of teachers. It reports some exploratory studies of the teaching behavior of persons supervising in laboratories and concludes with a consideration of the status of knowledge with regard to supervisory behavior in professional laboratories." Many of the studies analyzed the verbal behavior of supervisors during conferences with students whereas others examined the conferences between the college supervisor and the cooperating teacher. Chapter vii, by Norman Mertz, points out that in emerging schemes of laboratory education the trainer or cooperating teacher serves as a guide to the student who is responsible for determining his own objectives and also for evaluating his attainment of these objectives. Thus, the cooperating teacher assumes the role of "supportive therapist," not unlike that of the college supervisor.

286.

Lindsey, Margaret; Mauth, Leslie; and Grossberg, Edith. Improving Laboratory Experiences in Teacher Education. New York: Columbia University Press, 1959, 262 pp.

This book describes the development of a research project designed to study the value of laboratory experiences for student-teachers. The study explored the relationship between lab experiences and the ascribed objectives of human development courses. The authors discuss various problems encountered and note the necessity of having (1) a detailed description of the laboratory experience as perceived by the student and those who have worked with him; (2) pre-tests and post-tests to measure both the attitudinal and cognitive effects of the experience; and (3) techniques for observing, recording, analyzing, and interpreting student behavior in real situations.

287.

Line, Jennifer. "Case Method as a Scientific Form of Clinical Thinking." American Journal of Occupational Therapy, 23 (July-August, 1969), 308-13.

The author discusses the merits of the case study method for clinical teaching and presents an example. An outline from which to develop the case method includes suggestions for establishing the frame of reference for each case, collecting data, and classifying the case appropriately for treatment planning.

288.

Linke, Charles A.; Frank, Irwin N.; Cockett, Abraham T. K.; and Netto, I. C. Vernon. "Case Studies for Medical Students." Journal of Medical Education, 48 (June, 1973), 584-88.

This article suggests a method of clinical teaching utilizing hospital case histories. The case studies are those of patients previously examined and treated in the hospital. Students receive a patient's pertinent history and his physical examination and laboratory findings; then, based on their perceptions of the patient's problems they give opinions and recommendations for further studies and treatment.

289.

Little, Dolores, and Carnevali, Doris. "Complexities of Teaching in the Clinical Laboratory." Journal of Nursing Education, 11 (January, 1972), 15-22.

The authors first point out that the clinical situation gives the teacher responsibilities and stresses which are not found in the classroom or laboratory, noting that physical and emotional fatigue are common occurrences. The article also comments upon the clinical instructor's functions, which they divide into three aspects: (1) the preparation of the environment and the student for the learning experience; (2) the facilitating of the learning during the experience; and (3) the follow-up which includes evaluation and modification of the plans for the future.

290.

MacNamara, Margaret. "Talking with Patients: Some Problems Met By Medical Students." British Journal of Medical Education, 8 (March, 1974), 17-23.

Ms. MacNamara observes that students discussing communication problems they have with their patients usually are revealing much about themselves and their own problems of communication. This article explores different methods of learning the art of talking with patients. The author describes learning from actual experience with patients, by using patient management cases from an instruction manual, by simulating patient/doctor encounters, and by participating in sessions with students and faculty. She suggests that the last technique can be developed for the greatest effectiveness.

291.

Mager, Robert F. Developing Attitudes Toward Learning. Belmont, Calif.: Fearson Publishers, 1968, 104 pp.

The author argues convincingly that the effect a course or educational program has upon the learner's attitude toward learning is more important in the long run than what he learns specifically during the experience. In his usual lucid, concrete way, Mager explains how the development of favorable attitudes toward learning can be made a specific goal, translated into a specific objective and evaluated as precisely as other objectives. (Fostering the Growing Need to Learn)

292.

Manning, Philip R.; Abrahamson, Stephen; and Dennis, Donald A. "Comparison of Four Teaching Techniques: Programmed Text, Textbook, Lecture-Demonstration, and Lecture-Workshop." Journal of Medical Education, 43 (March, 1968), 356-59.

In this comparison of teaching methods the authors concluded that there was no evidence that any technique was inferior to any other. They felt it was impossible in this study (which involved 148 physicians and three instructors) to measure gradients of technique effectively. The article provides some useful information concerning cognitive goals. The authors cite the need for physicians to have adequate opportunity to acquire facts, gain understanding of principles, generalizations and concepts, and learn procedures in the most effective and efficient way.

293.

McCarthy, William H., and King, Thomas C. "Evaluating Patterns of Surgical Clerkship Programs." Journal of Medical Education, 43 (March, 1968), Special Issue, 367-71.

The authors report on a comparison of students' experiences in surgical clerkships at four different clinical facilities. They found no significant differences in educational outcome. None of the aspects of hospital environment which students complained about seemed to have interfered with acquiring knowledge and skills.

In fact, students reaching their surgical clerkship in the last quarter of the academic year were found to have already achieved most of the clerkship objectives before entering the clerkship. The authors, under these circumstances, suggest that either the objectives be changed or that students use the time for elective study.

294.

McDougall, I. R.; Gray, H. W.; McNicol, G. P. "The Effect of Timing of Distribution of 'Handouts' on Improvement of Student Performance." British Journal of Medical Education, 6 (June, 1972), 155-57.

The authors report on an experiment conducted to determine the best timing of the distribution of lecture "handouts" and the extent to which the students' knowledge of the subject was improved by their use. Students in a hematology course were divided into two groups, one of which received handouts before each lecture and another which received them after the lectures. Results showed that at the end of the three-week course the group given the handouts before the lectures scored significantly better than the other group, but, in the end-of-term examination, the difference between the two groups was insignificant. Both groups were tested before the lectures began and scored poorly; both had strikingly improved scores at the end of the term, with no significant difference between the two groups.

The conclusion is that a distribution of handouts prior to lectures appears to be more favorable, but the benefit may be short-lived. It was not clear, since there was no control group without handouts, whether handouts have any intrinsic value as teaching aids.

295.

McGlothlin, William J. Patterns of Professional Education. New

York: G. P. Putnam and Sons, 1960, 288 pp.

The purpose of this book is to describe policies and practices, i.e. the patterns, of professional education. McGlothlin organizes his subject in a logical sequential presentation of information relating to educational aims, teaching methods, curriculum, clinical instruction, and faculty. Chapter iii, "Methods of Instruction," deals with classroom learning, clinical teaching, and with various types of on-campus and off-campus experiential programs as well. The author describes the distinctive features of internships in nursing, medicine, clinical psychology, teaching, and social work. The book concludes with a discussion of professional ethics, in which the author compares several professions' approaches to the teaching of that subject.

296.

McGown, Helyn L., and Faust, Gerald W. "Computer-Assisted Instruction in Physical Therapy: A Pilot Program." Physical Therapy, 51 (October, 1971), 1113-20.

For this study of computer-assisted instruction a program was specifically designed for presentation to a group of 20 physical therapy students and 14 graduate physical therapists. The effectiveness of the program was evaluated by comparing the results of tests administered during the program, immediately after the program, and two weeks after the conclusion of the program. The method appeared to be effective in terms of time cost to students, and produced definite learning gains. The subjects received the program well and lauded its convenience.

Computer-assisted instruction offers the student the opportunity to learn at his own rate and to enjoy the benefits of one-to-one teaching. However, the cost, need for extensive course development, and dependence on machinery and trained personnel are factors which limit its practicability for extensive use.

297.

McKevitt, Rosemary Kerr. "A Student Centered Approach for Baccalaureate Nursing Education." Unpublished PhD. dissertation, Teachers College, Columbia University, 1971, Dissertation Abstracts 32, 1681-B.

Offering an alternative method to the classroom teaching of nursing, the author presents a model of a student centered learning approach, based on the needs of a profession in a rapidly changing world. The study discusses the changing trends in education for the health field and supports individualized education.

298.

McTernan, Edmund J. "Clinical Instruction in Affiliated or Co-operating Institutions." Handbook of College and University Administration. Edited by Asa Smallidge Knowles. New York: McGraw-Hill Book Co., 1970.

McTernan states that the educational program must be the responsibility of one institution. In the case of a clinical affiliation, the program is the responsibility of the educational institution, while in the case of an academic affiliation, the control rests with the hospital, students coming to the academic setting under the terms of the contract agreement. In both cases, communication must be facile in order to constantly evaluate the program, receive and consider suggested improvements from all parties concerned, and integrate revisions. Administrative policy should be determined by a conference committee which can decide upon the affiliation agreement; daily operational policies and procedures of the program, within the content of the affiliation agreement, are to be considered by the Committee of the Educational Director and the Clinical Department Head from the Committee on Administrative Policy. The affiliation agreement, which should be drawn up using legal counsel, must include the following points: dates covered by the agreement, schedules, facilities, communications, academic considerations, student considerations, faculty and staff considerations, and fiscal considerations such as student payments.

299.

Miller, George E.; Abrahamson, Stephen; Cohen, Ira S.; Graser, Harold P.; Harnack, Robert S.; and Land, Adelle. Teaching and Learning in Medical School. Cambridge, Mass.: Harvard University Press, 1961, 296 pp.

This reference book on teaching and learning, one of the first designed for medical educators, is important as a source of applications of contemporary principles of education, psychology, and methodology for medical faculty. Its aim is to encourage re-examination of traditional methods of education in medical schools by suggesting improvements and pointing out new practices. This was a pioneer work--far-sighted, practical, and well-done. It remains very useful and is still frequently referred to today.

The book is divided into four parts: (1) the medical student (a discussion of the problems of selection and admission, and of the effects of stress on personality); (2) the process of learning (a presentation of elementary learning theory and principles of learning); (3) the tools of instruction (primarily classroom instruction); and (4) the evaluation of learning (a well-organized overview of the field). The in-depth discussion of stress and personality has many implications for clinical teaching; further suggestions and guidelines for clinical teachers are offered in Chapter ix. The section on evaluation, in addition to covering the usual topics of evaluation as a general process, measurability, observation tools, and rater error, includes detailed discussions of attitude measurement and grading.

300.

Miller, Wallace E. "Application of Adult Learning Procedures to an Orthopedic Problem: Major Objective-Developing Competency in Orthopedics." Southern Medical Journal, 67 (March, 1974), 319-27.

The author summarizes the general principles of adult education as espoused by such educators as Getzels, Gibbs, and McKeachie; then he applies these to the specific goals for teaching orthopedic residents. Aware of his student as an adult learner, the instructor in orthopedics is as concerned with his responsibility in influencing behavioral responses for years that lie ahead as he is with teaching content of his material. The content must be balanced with the process, since in process lies the opportunity for learning new ways. The following applications of adult learning procedures are prescribed and developed in detail:

(1) Set up self-directed instructional units with spelled-out objectives (Gibbs says, "Goals must be set and the search organized by the learner"). Application of what is learned must be apparent to the student at once ("Learning must be experience-centered").

(2) Devise practical testing methods to determine how objectives are being met--both in retention of information and changes of attitude.

(3) Establish an open-end timetable. Once objectives have been clearly defined let the student set his own pace.

(4) Apply methodology for changes in motivation. The teacher has the opportunity, especially late in the residency program, to stimulate changes. The student is receptive to differences in means to solving ploblems, and the teacher should provide discussions, peer reviews and workshops for developing the student's competence.

(5) Stress principles, in content material, rather than training the student to follow recipes or rigid guidelines.

301.

Moore, Margaret L., and Flowers, E. Sue. "New Staffing Pattern for Education, Service, and Development." Physical Therapy, 54 (February, 1974), 141-47.

The authors describe a team approach to physical therapy, in a program implemented at The University of North Carolina at Chapel Hill, which combined academic faculty and clinical staff into teams related to medical specialties. Part of the rationale behind this increased contact between faculty members and clinical instructors was to bring together the competencies of both for the educational benefit of the student. Other objectives were to improve patient care and to develop a closer, more productive relationship with attending physicians. It was found that clinical staff members derived some continuing education benefits, but no data on the actual effects of the team approach on the educational process were reported.

302.

Mooth, Adelma E., and Ritvo, Miriam M. Developing the Supervisory Skills of the Nurse: A Behavioral Science Approach. New York: Macmillan Co., 1966, 107 pp.

This book was written to aid developers of the inservice education programs for nurses. The authors state, "We champion the twin theories that supportive, participative supervision and adult teacher-learner partnership elicit the highest productivity and morale." They employ the case method of instruction, offering for discussion a variety of supervisory situations that actually occurred in hospitals.

303.

Morgan, William L.; Engel, George L.; and Luria, Milton N. "The General Clerkship: A Course Designed to Teach the Clinical Approach to the Patient." Journal of Medical Education, 47 (July, 1972), 556-63.

The course described by these authors focuses on step-by-step learning of basic clinical skills (interviewing, and conducting the physical examination), always in small groups under direct supervision of an instructor. The emphasis throughout most of the first five weeks of the clinical instruction period remains on skills, leaving aside the volume of knowledge to be acquired until after the basic clinical techniques have been mastered.

304.

Myers, Cordelia; Shannon, Philip D.: and Sundstrom, C. "Strategies in Clinical Teaching." American Journal of Occupational Therapy, 23 (January-February, 1969), 30-34.

This article focuses on educational concepts and teaching strategies employed in a 36-week occupational therapy clinical affiliation which offers a program designed to provide all phases of O.T. clinical instruction in a single center. In the center (Letterman General Hospital, San Francisco), students move through a progression of six units of essential treatment experiences, each one devised to introduce them systematically to patient conditions of increasing complexity. In addition, the majority of cases under consideration in each unit are related, making learning experiences more understandable.

These authors believe that the single-center approach to clinical education offers advantages to faculty and students. They include: (1) contact between students and faculty over an extended period means supervisors gain better knowledge and understanding of individual students; (2) undue duplication of supervised clinical practice is eliminated; (3) students can be held responsible for all the information gained and carried forward for application in the clinical experience; (4) consistent supervision can be provided.

305.

Nethery, Joan C. "Clinical Education--A Proposal for Change." Proceedings of the World Confederation for Physical Therapy, Seventh International Congress, Montreal, Canada, June 1974. London: World Confederation for Physical Therapy, pp. 59-66.

Nethery believes that changes must be made in physical therapy clinical education in order to fulfill the demands made on the modern-day physical therapist by today's health care needs. She reports on a study of clinical education conducted in 1971 in which she solicited information from three sources: academic faculty members responsible for clinical education; clinical instructors in affiliating agencies; and physical therapy students entering the clinical education phase of their basic education. A second survey of academic faculty responsible for clinical education was made in 1973 to update data concerning school curriculums. In this paper Nethery presents a full description of the data collecting--sources, instruments, and statistics generated by the responses. She analyzes the findings in detail, producing data about each of the three groups questioned. Her proposals for change include the recommendation that the term "clinical education" be abandoned in favor of "internship," which would not restrict learning experiences to clinical practice. The internship she advocates would stress learning experiences in consultation, teaching, research, and administration, and would last for a mean period of six months. She proposes that curriculums be kept flexible to allow for individualization for each participating institution and intern, and she recommends a minimum wage for the intern, with consideration of tuition being paid to the internship institution.

306.

Newsom, R. S.; Eischens, Roger; and Looft, William R. "Intrinsic Individual Differences: A Basis for Enhancing Instructional Programs." Journal of Educational Research, 65 (May-June, 1972), 387-92.

An abstract at the beginning of the article summarizes the content as follows: "Individualization of instruction is often acclaimed as a desirable educational strategy, but the manner by which to implement this strategy has remained elusive. Part of the problem resides in the fact that individual differences among learners are complex and extremely diverse in nature. It is proposed that the most significant differences among people that are pervasive in learning situations are 'intrinsic' individual differences, or those that result from the interaction of unique biochemical and neurophysiological factors with each individual's unique sociohistorical background. The use of prototypic-learner models appears to give great promise for acknowledging these individual differences and for developing individualized instructional programs for typical classroom subject matter."

307.

Nord, Lynn Jaeger. "An Interdisciplinary Educational Program for Occupational Therapy and Physical Therapy Students." American Journal of Occupational Therapy, 27 (October, 1973), 404-05.

The author explores the concept of a core curriculum in implementing a change to bring about a single department for teaching occupational therapy and physical therapy. She solicited opinions from 54 heads of occupational and physical therapy departments. The response was overwhelmingly in favor of establishing a core curriculum to serve both. (Interestingly, however, fewer than half of these thought that such a program would continue to produce the same caliber of clinician produced by their separate programs.)

The author argues the need for constructing interdisciplinary programs and presents a program plan. Obviously, eliminating duplication in the teaching of basic sciences would benefit both disciplines. In addition, the author feels that all the students would grow in awareness of their roles in the total health care picture and develop better understanding of the roles played by their colleagues. Her program stresses achieving competency in essential skills rather than fulfilling specific program requirements.

308.

North, Frederick A. "Learning Clinical Skills Through the Use of Self-Teaching Films." Journal of Medical Education, 42 (February, 1967), 177-80.

This describes some of the advantages found in using short teaching films as devices for instruction in clinical education. At the University of Rochester School of Medicine medical students and pediatric house officers used the films to teach themselves the skills and findings of the Gesell neurological and development examination. Based on their effectiveness, the author reccommends further exploration of their usefulness. Films offer excellent opportunities for teaching clinical skills that require observation and execution of complex movement, enabling the student to view behavior repeatedly, and viewing clinical material at his own convenience and pace.

309.

North, Mary Yowell. "Individually Paced Instruction." American Journal of Occupational Therapy, 28 (March, 1974), 148-50.

This author describes a program at South Oklahoma City Junior College which uses "an approach to learning experiences adaptable to the individual learning styles of occupational therapy technician students. Individually paced instruction (IPI) enables students to progress as rapidly or as slowly as their present learning speed allows." This method makes use of learning packets and multimedia instruction as well as individual testing and challenge examinations by which students can receive course credit.

310.

Pellegrino, Edmund D. "The Regionalization of Academic Medicine: The Metamorphosis of a Concept." Journal of Medical Education, 48 (February, 1973), 119-33.

This article advances persuasive and comprehensive arguments for creating regional area health education centers (AHEC), multi-institutional networks designed to integrate manpower production, health care delivery and health care research. Proponents of AHEC point out that at university hospitals opportunities are lacking for clinical training in secondary care and family care, primary and first-contact care, long-term care, and health maintenance: areas of health needs that are not being met and for which the bulk of health professionals should be trained. (In other words, university hospitals chiefly provide highly specialized care.) The argument can also be made that academic clinicians in university hospitals are not suited or motivated to teach all of the roles required for adequate health care.

Other advantages to be found in regional health centers include a broader base for continuing education benefits, ". . . a better perception of efficacy, efficiency, productivity, and costs of delivering health care to a variety of populations . . ." (p. 124), and a greater capacity for manpower production (as the academic center fills the need for leadership in organizing and supervising these extensions).

The Health Sciences Consortium at Stony Brook, New York, is cited as a model of the type of center the author advocates.

311.

Pigors, Paul J. W.; Pigors, Faith; and Tribou, Marita. Professional Nursing Practice: Cases and Issues. New York: McGraw-Hill Book Co., 1967, 537 pp.

The authors of this two-part text designed it as a working tool to assist nursing students and graduates to develop the many skills which must be learned for professional nursing practice. The book's intended use by students and teachers is evidenced by two complementary sections, Students' Text and Teachers' Text. The authors employ the case report method of instruction because they feel it best utilizes a teacher-student relationship which recognizes cooperation, communication and decision making as the essential goals in self-education and mutual learning. In the Students' Text there are partial descriptions of ten different patient cases from which the student receives only enough information to allow him to make short-term treatment decisions. The Teachers' Text provides the missing facts on which to base further assessments. From all facts together, in consultation with teachers, and drawing from his understanding of all the peripheral conditions in the case, the student formulates the issues for short-term and long-term action.

312.

Pinkston, Dorothy; Hockhauser, Sandra L.; and Gardner-O'Laughlin, Karen. "Standards for Basic Education in Physical Therapy: A Tool for Planning Clinical Education." Physical Therapy, 55 (August, 1975), 841-49.

This article describes the clinical education program for physical therapists at Cleveland Metropolitan General Hospital. Using the Standards for Basic Education in Physical Therapy as the basis for organizing and implementing the program, the program design concentrates on the evaluation and communication processes. In addition to including the reasons for using this particular approach to clinical instruction, the authors offer a preliminary subjective evaluation of the program.

313.

Plotz, Charles M. "A New Effort Begins to Integrate Medical Education and Services; Lessons Apparent for United States." Association of American Medical Colleges Education News, 4, April, 1975.

The author describes the design of a medical school recently established in Israel whose objective is educating and providing physicians for primary and continuing care in the community. To this purpose community physicians were recruited and trained to be faculty members, and from the beginning of training, students are assigned for one day a week to a community health facility. In an effort to overcome the elitist attitude in many medical schools, the new school emphasizes learning from health care delivery teams and seeing the contributions of the community medical doctor. The author recommends more integrating of community medical doctors and medical center specialists in American schools "to make service in community more attractive and eliminate the conscious or unconscious bias of classification of physicians into a two-tier system."

314.

Purtilo, Ruth. The Allied Health Professional and the Patient: Techniques of Effective Interaction. Philadelphia, Pa.: W. B. Saunders Co., 1973, 229 pp.

This book offers "guidelines for interaction which are rationally based on theory and sensibly flexible in application." Purtilo points out that clinical education is needed in order for the student to acquire the skills and attitudes necessary for professional preparation. Skills discussed include motor skills as well as those in the areas of interpersonal relationships, teaching, administration, and research. She also notes how student anxiety can be reduced by the clinical instructor's counseling and stresses the importance of clinical education, citing the results of a questionnaire which indicate that students were more positive toward their profession due to their clinical experience.

315.

Quinn, Mary Ellen. "An Investigation of Undergraduate Field Study Experiences at Michigan State University." Unpublished Ph.D. dissertation, Michigan State University, 1972, 174 pp.

The investigation conducted by Dr. Quinn for her dissertation was a survey and analysis of undergraduate off-campus learning experiences in American colleges and universities. The purpose was to gain insight into the current state of field study programs in order to write guidelines and recommendations for further development and implementation. Data were compiled to produce information about what programs are available, to what extent their design and evaluation meet stated goals, what problems the institutions face in implementing programs, and how the students evaluate their experiences.

The findings identified a number of problems, chiefly in the consumption of faculty time involved and in institutional costs, but the author also found that students are enthusiastic, which she feels justifies continuing efforts to provide field study experiences. She presents a list of guidelines for future developers.

316.

Quinn, Mary Ellen, and Sellars, Louise. "Role of the Student." Implementing Field Experience Education. Edited by John Duley. New Directions for Higher Education, No. 6, Summer, 1974. San Francisco, Calif.: Jossey-Bass, pp. 31-38.

These authors deal with the recent development of field experience education as it affects and increases the responsibilities, freedoms, and demands that are conferred or imposed upon the student. An interesting range of field experiences is described. The student's role, as he endeavors to become "an independent, self-initiating learner," is defined in a set of eight subcomponents: (1) initiator, (2) problem solver, (3) cultural analyst, (4) interactor, (5) information source, (6) free agent, (7) value clarifier, and (8) communicator. Several obvious conclusions are drawn--that there is a need on the student's part for maturity, and a need on the educator's part for strong guidance; and in addition, a close look should be taken at new definitions of the roles of each.

317.

Ramsden, Elsa L. "Behavioral Science in Medical Education: A Learning Model." Journal of Medical Education, 49 (December, 1974), 1182-83.

The author recommends a program involving videotaping of student-patient encounters in the clinic. She suggests that tapes provide a worthwhile means for medical students to observe, study and discuss (with peers and supervisors) their interpersonal transactions during patient interviews.

318.

Ramsden, Elsa L, and Dervetz, Hyman L. "Clinical Education: Interpersonal Foundations." Physical Therapy, 52 (October, 1972), 1060-66.

This article focuses attention on the clinical educator and the components of the teacher-learner process in the clinical setting. The author explores the interpersonal behaviors of teacher and learner and the characteristics in the clinical setting conducive to learning. It is essential first of all that a department of physical therapy be committed to the philosophy and importance of clinical education. Students bring to this environment the stimulus and impetus for maintaining and continually upgrading the level of professional practice. Clinical instructors act as agents of change--diagnosing the needs for change in the learners, examining the pertinent facts, determining and applying new behaviors, and providing emotional support for the students during the learning-changing process.

319.

Rausch, Verna L. "Does 2 Plus 2 Equal 3 Plus 1? A Comparison of Graduates From Two Curricula in Medical Technology." American Journal of Medical Technology, 40 (June, 1974), 285-301.

This evaluation of graduates from the two types of curriculums was carried out by comparing the last two groups of students graduated in the old curriculum with the first two groups graduated in the new. The clinical requirement in the 3 plus 1 type curriculum was a full year (52 weeks). In the second curriculum the requirement was revised to a 2 plus 2 program, which offered two years of structured laboratory experience integrated with clinical instruction (20 weeks each year). Measurable data were obtained on 57-65 per cent of the total number of students. The author describes in detail the methodology employed. Attention is paid in particular to the grading of responses to 132 items included in a forced rating scale questionnaire addressed to each graduate's supervisor. The study demonstrated that "the shortened clinical experience phase was not detrimental to the students' ability to perform satisfactorily."

320.

Reed, D. Cramer. "Integrated Teaching for Medicine and Allied Health." Journal of Allied Health, 2 (Fall, 1973), 159-62.

The author reviews the importance of the team concept in health care delivery and suggests that it is unrealistic to plan programs designed to foster the team approach unless students from the various health disciplines learn how to function together by training together. Reed urges that health educators concentrate their efforts to provide and facilitate cooperative learning. He advocates selecting faculty members with dual responsibilities in clinical care and allied health disciplines to help promulgate the team concept and to provide shared experiences. He urges that health teams be afforded community study opportunities to gain understanding of the contributions made by each discipline. At the undergraduate level he feels that early efforts can be made to bring together students in the health related professions, through clubs and other shared activities.

321.

Reichsman, Franz; Browning, Frances E.; and Hinshaw, J. R. "Observation of Undergraduate Clinical Teaching in Action." Journal of Medical Education, 39 (February, 1964), Special Issue, 147-68.

This article is based on a study of undergraduate clinical teaching at the University of Rochester Medical School. The authors produced a list of objectives and a list of the aspects of teaching and learning they felt were the most important elements in constructing effective methods of clinical education.

322.

Ripley, Herbert S.; Johnson, Merlin H.; and Scher, Maryonda, E. "Evaluation of Patient Care When Shared by Medical Students and Resident Psychiatrists." Journal of Medical Education, 49 (March, 1974), 245-52.

This article describes the impact of the presence of clinical students in a psychiatry clerkship on health care delivery, and the ability of students and instructors to operate as a team in patient care. The study involved psychiatry residents.

323.

Robinson, Sereta. "Clinical Inference in Medical Education: A Look at Teaching and Evaluating Problem-Solving Skills." Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C., April 1, 1975, 45 pp.

The author has searched the literature to determine what is known about the nature of the problem-solving process and what are the best and most effective ways of teaching and evaluating problem-solving skills. The paper is presented as a synthesis of the relevant literature addressing itself to teaching and evaluating problem solving. The inquiry process, problem-oriented records, and simulated patient management problems are covered, the latter in particularly great detail. Ms. Robinson concludes that simulated problems are most useful in formative rather than summative evaluation and cautions against their use for grading purposes.

324.

Rutan, Fred M. "Comparison of Self-Instruction and Lecture-Demonstration in Learning a Physical Therapy Skill." Physical Therapy, 53 (May, 1973), 521-26.

This was a comparison study of the effectiveness of learning to perform a physical therapy skill (EDX) by lecture-demonstration or by the use of slide-sound self-instructional equipment. It was found that there was no significant difference in performance, or in attitude toward the learning procedure. The author recommends that self-instruction materials be developed and made available especially for continuing education, where they could provide worthwhile advantages in convenience.

325.

Schmidt, Dolores M. "Supervision: A Sharing Process." Child Welfare, 52 (July, 1973), 436-46.

A discussion of the relationships between social workers and their supervisors, this article points out that the role of the supervisor is to expedite, educate, and enable. The author discusses why those being supervised feel threatened and notes that the supervisor is obliged "to understand and to foster the creative spirit and the constructive ability" of those he is supervising. Also included are lists of learning stages for the new worker and of clinical learning objectives.

326.

Schuck, Robert F.; Watson, Charles G.; Shapiro, Alvin P.; and Barnhill, Bruce M. "The Use of Behavioral Objectives in the Development and Evaluation of a Third-Year Surgical Clerkship." Journal of Medical Education, 49 (June, 1974), 604-07.

This is a study of behavioral objectives used to evaluate a surgery clerkship to provide data for making changes in the program, and to evaluate the students. Details of the processes of identification and evaluation of objectives are described. The authors were able to report that identifying objectives of the program afforded the following advantages: (1) provided direction for teaching, and designing curriculum; (2) improved student, faculty, and course evaluation; (3) enabled elimination of repetition in some teaching areas, and reinforcement in areas of weakness.

327. Schwab, Edward, Jr., and Schwab, Reiko. "Facilitating Attitude Learning." AHIP News, Center for Allied Health Instructional Personnel, University of Florida, Gainesville, pp. 5-7 (date and issue unavailable).

The assumption that affective learning will follow cognitive learning, the author states, is a myth. Attitude is "a learned predisposition to react in a particular manner, positively or negatively toward a person, idea, or object." (p. 5)

In order to teach attitudes there are certain prescribed principles of instruction. First is identification of the attitude to be taught. Then the teacher must provide: (1) "informative and pleasant experiences with the attitude object" (an attitude object is the target of the attitude) (p. 5); (2) exemplary models; (3) an identity with a group, so that the commitment of the group to a particular attitude is a positive influence; (4) opportunities to practice the desired attitude; and finally, (5) encouragement to cultivate the attitude independently.

328.

Sheehan, T. Joseph. "Medical School Climate: Comparative Faculty and Student Views." Journal of Medical Education, 45 (November, 1970), 880-87.

Selected students, basic scientists, and clinical faculty at Case Western Reserve University were asked to complete an instrument consisting of 30 contrasting adjective pairs separated by a seven-interval scale by indicating their degree of positive or negative response to the first, second and fourth years of medical school at Case Western. Some of the adjective pairs used as scale anchors on this climate rating scale were as follows: boring/exciting; impersonal/personal/; guided tour/quest; locked-step/individualized.

Three conclusions were reached: (1) the basic science faculty were more negative about the first year of medical school than were clinicians; (2) fourth-year students and clinical faculty rated the fourth year of medical school in the same way; (3) the fourth year of medical school is viewed as a very different year from the first or second years.

329.

"Simulation: A Special Report." Association of American Medical Colleges Education News 2, April, 1975.

Three models for learning by simulation are dealt with in separate articles. Each was designed for use by medical students either to supplement clinical experience or to precede it and prepare the students for their first patient contact. The first technique discussed provides faculty-provided simulated medical cases prepared in realistic models. The second model described is a self-instructional lab "where medical students use simulated parts of the body and machines to enhance learning skills." The third simulation is a model called "Sim One," which performs effectively in three areas of instruction: respirator application, pulse and respiration measurement, and induction of anesthesia.

330.

Skipper, James K., Jr.; Mulligan, Jack L.; and Garg, Mohan L. "The Use of Peer Group Review in a Community and Family Medicine Clerkship." Journal of Medical Education, 49 (October, 1974), 991-93.

This article briefly describes results of a project involving medical students in a clerkship who audited medical records and evaluated the medical care being provided. The purpose was to make the students more knowledgeable about the Professional Standards Review Organization, but the evaluating project led to a process of self-evaluation which resulted in changes in their own behavior, particularly in the area of keeping patient records. The end result of the review project was that it became a case of experiential learning.

331.

Spencer, David S., and Connors, Edward J. "These Managers Benefit From Long-Term Training Program." Modern Hospital, 115

(October, 1970), 100-02.

The authors present a two-year program for management training which they initiated at the University of Wisconsin Hospital to improve management capabilities of personnel within the hospital. For the first six months of the program attendance at a regular university course was required one hour per week. For two to three hours weekly the participants took part in middle-management seminars integrated by the hospital administration and conducted by individuals from inside or outside the medical center; these were correlated with the classroom instruction. The remainder of the course, approximately 18 months, consisted of developing individual talents for the fulfillment of specialized management goals in the hospital. Participants received instruction in theory of organization and management, and conducted an in-depth study of selected functions within the medical center.

332.

"Standards for Basic Education in Physical Therapy, Adopted by the Board of Directors of the American Physical Therapy Association, June 1971." Physical Therapy, 52 (May, 1972), 521-25.

In an outline of competencies to be developed by the student of physical therapy, the Board of Directors classified three broad categories:

1. those in common usage in physical therapy service throughout the country in which the student should develop a level of skill adequate to allow safe and effective performance;

2. those utilized primarily in specialty areas of physical therapy services in which the student should develop knowledge of concepts and principles;

3. those rarely used in current physical therapy services, but which students should know exist; students should recognize possible contributions of these activities to patient services.

Upon completion of the physical therapy program, a student should possess competencies in the following categories: (1) individual patient services in the area of physical health; (2) individual patient services in the area of psychosocial health; (3) communication; (4) administration; and (5) professional growth.

Providing these standards serves a dual purpose: to make available a set of practical guidelines on which faculty and administrators of existing and projected educational programs can base realistic planning, self-assessment, and review of facilities and curriculum; to ensure that public interest will be protected by facilitating and strengthening the accreditation process.

333.

Stein, Rita F.; Steele, Larry; Langhoffer, Howard F.; and Fuller, Magdalene. "A Multimedia Independent Approach for Improving the Teacher-Learning Process in Nursing." Nursing Research, 21 (September-October, 1972), 436-37.

This article describes research which was designed to identify learning experiences in a multimedia approach to nursing education. The experimental group worked independently, supplemented by class assemblies, whereas the control group was taught by the traditional classroom-laboratory-clinic method. Results indicate that the experimental group was more satisfied with the course, experienced more interaction with the faculty, and enjoyed the classroom environment more than did the control group. Yet, the assumption that the faculty-student ratio would decline due to the multimedia method was not found to be valid.

334.

Stritter, Frank T., and Bowles, L. Thompson. "The Teacher as Manager: A Strategy for Medical Education." Journal of Medical Education, 47 (February, 1972), 93-101.

The approach to clinical education described in this article is a systems approach in which the instructional system is learner-oriented and the teacher functions as manager. The authors provide detailed directions for setting up this system, implementing its operation, and evaluating its effectiveness. To illustrate the teacher-manager system, an example of its use in an Introduction to Surgery Clinical Clerkship is included, and one particular case of developing an objective is examined in detail.

335.

Stritter, Frank T.; Burford, Hugh J.; Johnson, Stuart R.; and Talbert, Luther M. "Documentation of the Effectiveness of Self-Instructional Materials." Journal of Medical Education, 48 (December, 1973), 1129-32.

The authors conducted a survey of self-instructional study to determine whether student performance was higher when the course objectives were taught using the traditional approach of lecture, seminar, and textbook, or when the same objectives were taught with self-instructional materials. The results showed that the students learning through the use of self-instructional materials scored significantly higher.

336.

Szumski, Alfred J. "Changing Needs in Physical Therapy Education." Annals of the New York Academy of Science, 166 (December 31, 1969), 1017-19.

Based on a curriculum study of physical therapy at the Medical College of Virginia, the author suggests two major areas for consideration in the future development of physical therapy education: (1) the need for developing leadership skills, to prepare the students to assume roles in areas requiring supervisory, consultative, and administrative capabilities; and (2) the need for correlating the academic and clinical aspects of the program. (The study showed evidence of needless repetition and contradiction, poor correlation between basic science and clinical teaching, and over-emphasis on standardization, which did not allow a student to pursue special interests.)

337.

Thompson, Monna. "Learning: A Comparison of Traditional and Autotutorial Methods." Nursing Research, 21 (September-October, 1972), 453-57.

The author reports on a study of 40 second-year nursing students (at the Evanston, Illinois, Hospital School of Nursing) who engaged in a program to test the effectiveness of teaching medical-surgical nursing using a self-instructional film/tape modular method. The media approach was combined with patient care, weekly conferences and seminars with faculty. Fifty-five per cent of the students preferred the media method to a traditional method. There was no significant difference in learning, nor any significant difference in retention of learning one year later. The faculty found a number of benefits in the self-instructional method which they believed resulted in better teaching.

338.

Tyler, Ralph W. Basic Principles of Curriculum and Instruction, Syllabus for Education 305. Chicago, Ill.: University of Chicago Press, 1950, 83 pp.

Tyler's syllabus outlines the necessary steps for developing a curriculum, pointing out that the school must establish its educational purposes, select educational experiences which will achieve these purposes, effectively organize these experiences according to the concepts of continuity, sequence and integration, and evaluate the effectiveness of the experiences. He urges that objectives be formed to indicate both the behavioral and content aspects; thus, the objectives can serve as a basis for all the further steps in curriculum planning. Tyler's principles have greatly influenced many subsequent publications on curriculum development.

339.

U.S. Department of Health, Education, and Welfare, Office of Education, Bureau of Educational Personnel Development. "Learning Environments--OR--Rooms for Thought," by Lawrence M. Stolurow. Chapter vii, How Teachers Make a Difference. Washington, D.C.: Government Printing Office, 1971, pp. 123-56.

The author notes that there are two differing concepts for describing a student's relationship with the "source of information that provides educational experiences"--one which views teaching as a "process of intervention" and the other which considers teaching "a process of interaction." This chapter deals primarily with the latter. In this concept of teaching, which is transactional and supportive instruction, the teacher manages the environment so that the learner's initiative is maximized and the teacher's role as the user of teaching methods is minimized. The concept holds that "it is more important to structure learning environments that embrace content and values while developing thinking rather than force-feeding large amounts of information for unidentified . . . purposes." The author lists steps necessary in designing learning environments for transactional instruction (including developing a hierarchy of behavioral objectives based on a task analysis, from which instructional sequences can be designed and evaluated), and stresses that learning should be planned so that there is a process of transference to the learner. Above all, the chapter points out the importance of focusing on student need which necessitates relating "individual differences to methods or strategies of teaching . . . if instruction is to be prescriptive or individualized."

340.

Watts, Nancy T. "Education as Planned Behavioral Change." Defining Clinical and Educational Objectives. Edited by Barrie Galern. Proceedings of the Ohio Occupational Therapy Association, 1969, pp. 13-37.

Of special interest in this article is the following list of criteria for predicting an effective learning experience: (1)

the experience lets the student practice the behavior, and work with the content of the objective; (2) it is appropriate to the student's background and level; (3) it gives the student satisfaction; (4) it fulfills more than one objective; (5) it is designed for minimizing negative secondary effects; and (6) it is practical in relationship to available space, time, equipment, and personnel.

341.

Welsh, Kenneth S., and Deuschle, Kurt W. "Developing a Community Laboratory for Medical Teaching Program: A Case Study." Journal of Medical Education, 43 (September, 1968), 969-77.

This article traces the development of the community laboratory teaching facility established by the University of Kentucky Department of Community Medicine to prepare students to deal with community health problems--serving not only medical students but also nursing and social work students as well as those from other disciplines such as engineering, education, and biology. In 1964, the developers of the program undertook to establish a day-to-day working relationship with a community close to the University (to make travel feasible for students and faculty) and suitable for the purposes of the program. After selecting the community, they obtained the endorsement and cooperation of health agencies and practicing physicians and set up a carefully constructed administrative system. By June, 1966, five categories of students had been introduced to the community laboratory. The authors describe and appraise the program and suggest its implications for the future.

342.

Wentworth, Lee, and Connella, Carmella. "Exploratory Study of Current Clinical Education in the Physical Therapy Curriculum." Unpublished paper, Division of Graduate Studies, Sargent College of Allied Health Professions, Boston University, 1970, 19 pp.

These authors initiated a multiphasic study to evaluate the physical therapy clinical education model in terms of present practice and future trends, and to test the model against principles of learning. They wanted the study to answer the question, "Is the model still compatible with societal needs, professional needs, and learning theory? Or, should we redefine and redesign clinical education to better meet the changing objectives?"

The authors drew a few general conclusions about changing trends in physical therapy education from the data collected in their survey, although the survey was still incomplete at the time they wrote. They cite changes in schools' emphasis of modalities, an increasing emphasis on evaluative techniques and program planning, newly developed types of clinical education experiences, and curriculum changes designed to meet the physical therapist's new responsibilities in administration, research, teaching and supervision.

343.

Whitcomb, Beatrice. "Methods of Clinical Instruction in Physical Therapy." Physical Therapy, 31 (April, 1951), 129-34.

This article is a discussion of methods of instruction for the clinical practice phase of the undergraduate program, especially those methods which relate to teaching supervisors. In an outline of methodology Ms. Whitcomb includes the teacher's (1) preparation for clinical presentation; (2) preparation of the student; (3) presentation of information; (4) encouragement of the student to gain sufficient practice; and (5) follow-up. She emphasizes the need for careful selection of clinical teachers, urges coordinating clinical instruction (when possible) with the didactic instruction the student is receiving in the classroom, and stresses the importance of helping the student develop desirable personal and professional standards of conduct.

344.

Zentmyer, Robert Kenneth. "Training of Allied Health Personnel: A Practical Approach." Clinical Obstetrics and Gynecology, 15 (June, 1972), 333-42.

The author, a Lieutenant Commander in the Navy Medical Service Corps, urges educators in the allied health field to consider the superiority of military-trained health personnel in certain areas. He believes the difference in military and civilian training is a matter of the military's having adopted a more practical approach--"action-oriented" training. He prescribes practical training based on well-developed course objectives.

345.

Zimmerman, Jack M., and King, Thomas C. "Motivation and Learning in Medical School: Evaluation of the Student-Centered Group." Surgery, 54 (July, 1963), 152-56.

The report of this study was offered by the authors as further evidence that students in a student-centered learning group acquire more factual knowledge and improve their critical thinking to a greater degree than students in a more traditional group.

FOR OTHER ENTRIES *related to clinical education process see also:*

9, 23, 33, 34, 38, 40, 44, 61, 65, 66, 67, 78, 79, 83, 86, 113, 114, 116, 119, 123, 130, 136, 139, 147, 150, 151, 159, 175, 182, 191, 196, 203, 204, 348, 349, 360, 373, 382, 383, 384, 399, 463, 466, 469, 541, 542, 544, 559.

Evaluation

346.

American Physical Therapy Association, Vocational Rehabilitation Administration. Evaluation in Physical Therapy Education. Proceedings of the Annual Institute. Bloomington, Ind., March 17-22, 1963. New York: American Physical Therapy Association, 1963, 108 pp.

The proceedings of this Institute on evaluation are divided into three sections. Section I is entitled "Components of the Evaluation Process" and consists of four talks on establishing objectives, developing criteria, developing measuring devices, and implementing the evaluation paradigm. These talks are an elementary presentation of the basic concepts of evaluation.

The highlights of Section II are the report by Rosemary Scully on "Levels of Competency" and an article by Margot Danker on "Forced Choice." The Scully report focuses on understanding what the student of physical therapy should know upon completion of his basic professional education. For what knowledge should all newly graduated physical therapists be held responsible, and what level of proficiency should be required? Three levels of competency are described and the author discusses how to determine both the level to which a treatment technique or procedure belongs, and the level of skill to be achieved in areas such as administration and education. The Danker article presents a forced-choice scale developed for rating the clinical performance of physical therapy students. The forced-choice technique and the rationale for applying it are discussed, and the author describes how she developed and validated the scale. The reliability of the scale and the advantages and disadvantages of using it are described.

Section II also includes articles in the Strong Vocational Interest Inventory and the Kuder Preference Test, and one on the professional examination service (certification). Husted evaluates the Institute itself, presenting a statistical analysis of the results of pre-tests and post-tests on evaluation which had been administered to the participants. Also of interest are some brief remarks on curriculum accreditation, the clinic in the evaluation process, evaluation of self, and evaluation of a facility.

Section III consists of special workshop reports and panel summaries. Group leaders presented some suggestions regarding the use of evaluation devices.

347.

American Physical Therapy Association, Vocational Rehabilitation Administration. Measurement Devices in Physical Therapy Education. Edited by Kathryn Shaffer. Proceedings of the Annual Institute. Chicago, Ill., April 12-17, 1964. New York: American Physical Therapy Association, 1964, 158 pp.

Some of the topics touched upon in this manual of proceedings are: academic quality of the university curriculum and faculty; attitude inventories; taxonomy of objectives; reliability and validity of tests; history and uses of high-speed computers; use of closed-circuit television for demonstrations of patient care; and institutional self-study. There is an article on "Assessment of Skills," by Richard M. Wolf, in which the author discusses how to go about evaluating the process of skill performance, describes several methods of collecting evidence of skill in performance, stresses the importance of summarizing the evidence appropriately, and comments on the construction of rating scales. Ruth Dickinson's "Levels of Competency" is reprinted here. The form used for rating the clinical performance of physical therapy students at the University of Southern California is reproduced on pp. 85-92, and some reactions based on six years' use of the form are offered, both from the point of view of the university faculty and from the point of view of the clinical staff.

348.

American Physical Therapy Association, Vocational Rehabilitation Administration. Measuring Student Performance in Physical Therapy Education. Proceedings of the Annual Institute. Lincoln, Neb., March 28-April 2, 1965. New York: American Physical Therapy Association, 1965, 165 pp.

The proceedings of this Institute contain information on the following: the need for close coordination and cooperation between clinical and academic faculties, behavioral objectives and evaluation, the statistical concepts used in determining reliability and objectivity, programmed instruction, and the need for physical therapists to examine what they are doing and why. The participants used a rating form to rate staged performances of physical therapists treating "patients" and discussed the variance in ratings that resulted. They also divided into small groups and constructed rating scales according to the directions and instructions of Richard Wolf, Ph.D.

349.

Anderson, Harry E., and Jantzen, Alice C. "A Prediction of Clinical Performance." American Journal of Occupational Therapy, 19

(March - April, 1965), 76-78.

This brief article reports the results of a study of a small sample of occupational therapy students which found no significant correlations between any measure of academic achievement and ratings of clinical performance. The authors write, "The results of the present study are consistent with those of previous studies in that grades and achievement measures appear to be ineffective predictors of clinical performance."

350.

Barro, Arlene R. "Survey and Evaluation of Approaches to Physician Performance Measurement." Journal of Medical Education, 48 (supplement, 1973), 1051-93.

The purpose of this study is to investigate the dimensions of physician performance and how they have been measured. The various approaches used to assess physician performance are reviewed and evaluated, and their suitability for specific purposes is discussed. The focus is on the individual physician and his patient (not on medical care systems), and on qualitative aspects of individual performance.

The Introduction points out that evaluation studies may focus on process or outcome, and that the process approach includes evaluation of both technical and interpersonal skills. There are chapters on technical process approaches (which include direct observation and use of medical records), interpersonal process approaches, simulated process approaches, and approaches for measuring outcome, and a brief chapter on Price's "Qualities Approach," which focuses on discovering the qualities or attributes of a good physician. A number of studies are reviewed and commented upon.

The author concludes that there is a definite inverse relationship between the quality of a measurement method and the ease and economy with which it can be applied. The methods that inspire the most confidence (direct observation and direct verification of outcomes) are very expensive and time-consuming. Methods that are practical to use on a large scale, such as simulations and the "qualities" approach (where rating scales are used without direct observation) have serious validity problems at present. Record-based methods fall in between on practicality and economy, but records may be inaccurate and they have an inherent bias in that the records are kept by the person being evaluated. Barro sees a major need to see the performance of the physician as holistic and to consider interpersonal-process performance an integral part of performance.

351.

Bassett, Glenn, and Meyer, Herbert. "Performance Appraisal Based on Self-Review." *Personnel Psychology*, 21 (Winter, 1968), 421-30.

The authors report on a study carried out to test the relative effectiveness of placing responsibility for performance review on subordinates. Instead of the conventional manager-initiated interview and form, a subordinate is asked to initiate the interview (based on a self-prepared form) to evaluate his own job performance. It was hypothesized that under these conditions the results would include more satisfying and constructive appraisal interviews, less defensiveness on the part of the subordinate under criticism, and greater improvement in subsequent on-the-job performance. In general the results supported the three hypotheses. The authors present an analysis of the findings and some implications for benefits to be derived by management and subordinates.

352.

Bills, Robert E. "Evaluating Instruction: Where Now?" Paper presented at meeting of the University of Alabama Learning Forum, March 21, 1974 (Mimeographed.) 7 pp.

The author takes a critical look at the accepted modes of teacher evaluation. He takes issue with a number of commonly held beliefs about teaching, and in the process, draws on a wide range of literature on faculty evaluation. Briefly, his point of view can be summarized in six arguments he offers against standard forms of evaluation which he believes are based upon fallacious premises:

(1) Teachers play more than one role and that role is not *just* communication, so rating scales should not place undue emphasis on communication behavior.

(2) All effective teachers are not alike, so success cannot be defined in terms of a single fixed ideal.

(3) Students do not agree on their ratings of instructors, nor do they agree on what makes an ideal teacher, so it appears that ratings are a function only of internal frames of reference or verbal systems.

(4) Student learning has not been related to faculty ratings, so before instructors can be evaluated on basis of what is learned, individual differences of students must be accounted for.

(5) Research on teacher effectiveness and evaluation of teaching has not yielded conclusive results.

(6) Overt manifest behavior of teachers is not what makes the difference in ratings or effectiveness.

Bills' major thesis is that when students are asked to rate the behavior of any instructor, what they are really rating is his "openness to experience" (cf. Carl Rogers). (He has developed two Q-sort devices to measure openness, and Finch (1973) found that teaching behavior as measured by Roman's scale correlated highly with openness as measured by College Teachers Q-Sort.) Bills feels strongly that students are highly concerned with the quality of their interactions with instructors. He wants to see teacher preparation and college administrators "assume some responsibility for positively affecting openness and relationship qualities of instructors." (Finch) Since the evaluative climate can make instructors more defensive and less open to experience, Bills recommends that self-evaluation be made the core of the faculty evaluation process. This would place the emphasis in evaluation on providing useful feedback for the instructor's own growth, not on weeding out the unfit.

353.

Bloom, Benjamin S.; Hastings, J. Thomas; and Madaus, George F. Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw-Hill Book Co., 1971, 923 pp.

Bloom's basic views on education and educational objectives, and his theory of learning for mastery, are set forth here. The distinctions between formative and summative evaluation are discussed in some detail, as are evaluation for placement and evaluation for diagnosis. This book's usefulness is limited by the fact that it is aimed primarily at elementary and secondary school teachers. It emphasizes test construction more than any other aspect of evaluation.

354.

Boyd, Joseph L., Jr., and Shimberg, Benjamin. Handbook of Performance Testing: A Practical Guide for Test Makers. Princeton, N.J.: Educational Testing Service, January, 1970, 182 pp.

This book provides some general information about performance tests and practical exams, and contains many detailed examples of performance tests. Some alternatives to work-sample tests are also presented, such as the "tab test" (originally developed for electronic technicians) which was the prototype of simulated patient management problems for physicians. Step-by-step guidelines for designing and developing a performance test are offered, including guidelines for the examinee and the examiner. The book is more concerned with and more applicable to testing the performance of industrial workers, machinists, mechanics, and the like, than it is with the performance of health care professionals, and it emphasizes product evaluation rather than process evaluation. The appendix contains a portfolio of thirteen different performance tests, one of which is a practical exam for dental hygienists.

355.

Brumback, Gary B., and Howell Margaret A. "Rating the Clinical Effectiveness of Employed Physicians." Journal of Applied Psychology, 56 (June, 1972), 241-44.

These authors describe briefly a rating scale for evaluating physicians which was patterned after research conducted in a U.S. Public Health Service evaluation program for commissioned officers (COEPR). The instrument which emerged from the COEPR includes a 37-item checklist and a graphic rating scale. Items on the checklist were derived from critical incidents, but neither checklist nor graphic scale ratings were completely tied to observation, and subjective judgments and overall impressions permeated the ratings. It was found that the checklist and the graphic rating scale correlated significantly with each other and with the criterion measure. The validity and rater acceptability were compared with the COEPR, showing that the validity was about the same for both, and the checklist and graphic rating scale were highly preferred by raters to less popular rating scales such as "forced-choice."

356.

Brumback, Gary B., and Howell, Margaret A. "Rating Clinical Performance." Journal of Dental Education, 35 (March, 1971), 179-82.

This study describes a checklist developed for rating the overall clinical performance of dentists in the U.S. Public Health Service. A trial checklist of 64 items abstracted from critical incidents was used by each dentist's supervisor to rate 73 dentists, indicating on a four-point scale the degree to which each checklist item described the dentist's clinical performance over the preceding year. Each dentist was also rated on a different form, a graphic rating scale, by about five work associates, whose ratings were averaged together. Only the 31 items which were shown to discriminate between a most effective and a least effective dentist, as identified by the work associate ratings, were retained for scoring. Checklist scores were found to have a correlation of .65 with the work associate ratings, which is claimed to indicate satisfactory validity. Split-half reliability was .95, probably due in part to halo effect. Work associate ratings yielded an interrater reliability of .73.

357.

Burke, Ronald J., and Goodale, James G. "New Way to Rate Nurse Performance." Hospitals, 47 (December 16, 1973), 62-68.

"New way" refers to a behaviorally anchored rating scale for performance evaluation. The concept to be evaluated is clearly defined as an observable category of performance. The "anchors" (words that give meaning to the numbers on the scale) are descriptions of behavior, not adjectives (e.g., 6 = usually does thus and such, not 6 = very good). Those who will use the scales to evaluate nurse performance (usually nursing supervisors) construct the scales, determine the areas to evaluate, define the areas, and describe the levels of performance within each area. Anecdotes are collected, categorized by area of performance, and given a scale value. The authors, who are professional evaluation consultants, have provided these supervisors with a complete description of how to write and select observable behaviors to represent the entire range of nursing performance. The manner in which to develop their device, and directions for how to use and interpret its findings, are offered in a manual of instructions.

358.

Cochran, Thelma C., and Hansen, Paul J. "Developing an Evaluation Tool by Group Action." American Journal of Nursing, 62 (March, 1962), 94-97.

This is an account of the development by nursing personnel at Latter-Day Saints Hospital of a device to evaluate nursing personnel. Their procedure was as follows: to study the purposes and reasons for evaluation; to study evaluation devices currently in use, and to compare them with procedures in use at Latter-Day Saints Hospital; to study attitudes toward evaluation with an eye to increasing its acceptability; and to develop a new evaluation device with a manual to serve as an interpretive guide and as a basis for rater training.

A list was made of the characteristics of good and poor nurses by analyzing essays written by the nurses themselves, describing the best and worst nurses they knew. Group discussions later reached a consensus on 30 characteristics which the group felt were all inclusive. A 10-point scale was developed to describe the degree to which each of these characteristics was displayed, with "to a typical degree" as the midpoint. The manual defined these general characteristics in terms of behaviors that could be observed daily in the hospital environment.

It was felt that this project improved attitudes toward evaluation, served as a learning experience and lessened resistance to the new evaluation system. The instrument developed was also used for self-evaluation.

359.

Conant, Robert M., and Hatch, Thomas D. "Policies for the Development of Credentialing Mechanisms for Health Personnel; A Progress Report--1974." American Journal of Occupational Therapy, 28 (May-June, 1974), 288-91.

The authors review credentialing practices and policies, supplying the background for their discussion of the development of criterion-referenced proficiency exams by the Division of Associated Health Professions, Bureau of Health Resources Development. The need for a comprehensive credentialing program derives from the need to certify more health personnel. The public is concerned about health manpower shortages, inefficient utilization of health personnel, questionable quality of services, and higher costs. In order to utilize the services of those health professionals who cannot meet the formal educational requirements of the professional organizations (and to satisfy the requirement of the federal government that health personnel who receive federal money for payment of their services be certified) the DAHP is formulating long-range goals of establishing uniform standards that will increase the opportunity for job mobility, serve as a guide for the relevance of formal training to the requirements of the job, and develop proficiency exams for credentialing the much-needed health personnel.

360.

Council of Physical Therapy School Directors. Development of Objectives in Physical Therapy Education. Proceedings of the Annual Institute. Chapel Hill, N.C., November 14-17, 1960, 101 pp.

Articles of interest in these proceedings include Ruby Decker's outline of aspects of clinical education to be investigated by a survey committee, and Lawrence Fisher's remarks on the four categories to be observed when evaluating teaching: factual knowledge, methodology, interest, and attitude. Fisher's article on the "Formulation of Objectives" is fundamental and is based on the work of Tyler.

361.

Diggory, James C. Self-Evaluation: Concepts and Studies. New York: John Wiley and Sons, 1966, 477 pp.

The author, who is a psychologist, discusses the philosophical and theoretical ramifications of self-evaluation and reports the results of some of his own psychological experiments concerned with self-evaluation.

Diggory introduces his subject with a discussion of the philosophical writings on the "self," beginning with Descartes, and of value theories such as "conative achievement." The author attempts to delineate objective self-evaluation by contrasting it with evaluations based on the opinions of others and with the self-assertions and demands for recognition referred to as "pride."

The author investigates the following conditions affecting a person's estimate of the probability of his own success: rates and accelerations of a performance curve; variability in performance from trial to trial; average level of performance; and distance and clarity of deadlines. Experiments are reported which study how this estimate of the probability of one's own success is influenced by witnessing the success or failure of another individual. The results indicate that two criteria of self-evaluation may be distinguished: self-evaluation may be based on an objective evaluation of abilities or solely on social approval and acceptance. Fluctuations in self-evaluation may produce "conforming" behavior.

Some of the other consequences of changes in self-evaluation are: functional withdrawal from a hopeless task by decreasing the energy spent on it; the fact that evaluation of a single ability which changes when the ability is tested may affect the evaluation of other abilities not tested; and an increase in death imagery associated with failure and subsequent lowering of self-evaluation.

The relationship of self-evaluation to psychopathology, death, and suicide is discussed at some length.

362.

Ebel, Robert L., ed., and Noll, Victor H., assoc. ed. Encyclopedia of Educational Research; A Project of the American Educational Research Association, 4th ed. New York: The Macmillan Co., 1969, 1,522 pp.

This reference work has articles on the following topics of interest: curriculum evaluation; measurement in education; measurement theory (including discussions of nominal, ordinal, interval, and ratio scales, and validity); medical education; marks and marking systems; inservice education of teachers; student teaching and supervision; and teacher effectiveness. These articles are brief reviews of the literature up through 1966 and they sometimes contain a large amount of factual information, as in the case of the article on measurement theory. The emphasis is on research in elementary and secondary school education, though colleges and universities are mentioned.

363.

Fivars, Grace, and Gosnell, Doris. Nursing Evaluation: The Problem and the Process; The Critical Incident Technique. New York: The Macmillan Co., 1966, 228 pp.

As the subtitle indicates, a major f[illegible] this book is the application of the critical incident technique to the evaluation of performance in nursing. The critical requirements approach to establishing objectives is presented, and the use of critical incidents to define behavior is discussed, as is the development of learning experiences consistent with critical requirements. Evaluation may be in terms of objectives, in terms of the task. in terms of performance, or in terms of professional standards; a chapter is devoted to each. Various tools of evaluation (e.g., situation tests) are discussed in a general way.

364.

Flanagan, John C. "The Critical Incident Technique." Psychological Bulletin, 51 (July, 1954), 327-58.

John Flanagan is credited with originating the concept of the critical incident technique. This is his own description of how the idea of analyzing performance through a description of critical incidents was conceived, the history of its development as a technique of evaluation, and a review of all the literature from it's inception in the late forties up to 1954. He describes the technique in this introductory definition: "C.I.T. consists of a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles. C.I.T. outlines procedures for collecting observed incidents having special significance and meeting systematically defined criteria."

Flanagan developed the C.I.T. in response to the need for more accurate evaluation of the performance of pilot candidates in flight training schools in the U.S. Air Force. Determining critical job requirements by which to select, classify, or train people for specific jobs was found to be inadequate when based solely on a list of desirable human traits. Systematic analysis of the causes of good and poor performance was needed; first-hand reports of successful and unsuccessful execution of assigned tasks was found effective in obtaining information from observers. The essence of the technique in its present form is that "only simple types of judgments are required of the observer, reports from only qualified observers are included, and all observations are evaluated by the observer in terms of an agreed upon statement of the purpose of the activity."

365.

Gage, N. L., ed., Handbook of Research on Teaching; a Project of the American Educational Research Association. Chicago, Ill.: Rand McNally and Co., 1963, 1,218 pp.

This volume is not entirely superseded by the Second Handbook of Research on Teaching because it covers different topics. The major aims of the Handbook are to summarize, critically analyze, and integrate past research on teaching. Chapter vii, "Rating Methods in Research on Teaching," by H. H. Remmers, is particularly good. Also of some relevance is Chapter xi, "The Teacher's Personality and Characteristics," by Getzels and Jackson, which discusses the Minnesota Teacher Attitude Inventory, various values and interest studies of teachers, projective techniques, and personality inventories, and summarizes Ryans' "Teacher Characteristics Study" of 1960. Additional chapters are devoted to patterns of teaching behavior and their origins, research design, statistics, and the measurement of classroom behavior by observation. These articles all review a substantial amount of literature on teaching research.

366.

Gaines, W. G.; Bruggers, H.; and Rasmussen, R. H. "Reliability of the Ratings of Products in Dental Morphology." Washington, D.C.: SIG/Health Professions Education. April 1, 1975. Paper presented at the annual meeting of the American Educational Research Association.

This report serves as an admonition to remind the users and creators of rating scales that findings will only be as usable (reliable) as the instruments themselves. The authors recommend that more time be spent in construction of rating scales (concurrently making it less necessary to conduct lengthy training sessions in their use). They conducted a study of rating scales used to rate wax carvings of a tooth produced by each of eight selected dental students. Seven different raters, using Form A in the first phase and Form B in the second phase, were asked to rate the carvings by the first scale and then three months later by the entirely different second scale. Different sets of students and products were used in the two phases. Analysis of the ratings showed that the differences in format led the raters to judge the same product along different lines when they used the less reliable scale. A description of the scales and their differences is offered.

367.

Goran, Michael J.; Williamson, John W.; and Gonnella, Joseph S. "The Validity of Patient Management Problems." Journal of Medical Education, 48 (February, 1973), 171-77.

The intent of the study described in this article was to compare the clinical judgment of physicians performing in a clinic setting with their judgement on an analogous Patient Management Problem (PMP) simulation test, in order to assess the validity of the PMP. Urinary tract infection was identified as the patient illness to be studied and two hypotheses were advanced: (1) that when confronted with a patient complaining of abdominal and/or flank pain, a team of clinical physicians will obtain as much relevant history and physical examination data from simulated patients as from real patients; (2) that for the same patient complaint the team will obtain indicated urine cultures as frequently from simulated patients as from real patients. Contrary to both hypotheses, the relevant patient histories and laboratory findings were obtained significantly more often for simulated than for real patients. Thus PMP performance did not discriminate between poor, average and good clinical performance. The authors summarize some of the implications and explanations for the results of the study.

368.

Gorham, William A. "Methods for Measuring Staff Nursing Performance." Nursing Research, 12 (Winter, 1963), 4-11.

This article describes six evaluation instruments, developed from a critical incident study, which ask raters (nursing supervisors) to make judgments of observable behavior in all areas of nursing performance. Some forms require a forced-choice, for instance, a profile checklist in which a rater must select two most descriptive and two least descriptive statements. One form requires that the rater make judgments based on comparisons with all other nurses the rater has seen performing the specified activity; one form calls for rating the nurse relative only to her own strengths and weaknesses. Two forms are based on direct observation of nurse performance, either effective or ineffective, while another is a checklist on which the rater marks the behavioral items observed in a nurse during a day. Findings from research into the use of these devices at several hospitals are summarized, but not supported with any statistical detail.

369.

Guilford, Joy Paul. Psychometric Methods, 2nd ed. New York: McGraw-Hill Book Co., 1954, 597 pp.

Twenty-one years after its publication this book is still one of the most often-cited and reliable sources of detailed information on rating scale form and construction. It discusses the advantages and disadvantages of the various types of rating scales and is particularly noteworthy for its discussion of rater error and methods for correcting rater error. It also contains chapters on the statistical aspects of reliability and validity, factor analysis, and the method of rank order.

370.

Herbert, John, and Attridge, Carol. "A Guide for Developers and Users of Observation Systems and Manuals." American Education Research Journal, 12 (Winter, 1975), 1-20.

This is a well-organized article which presents in detail the criteria which an observation instrument should meet. The authors deal primarily with systems for observing classrooms and teacher behavior in the classroom, but their criteria are applicable to any type of instrument based on observation. They write, "If these criteria are met, the developer of the instrument has provided enough information to enable him and subsequent users to make sound judgments regarding his instrument's appropriateness for particular purposes." The criteria are organized in three sections: (1) identifying criteria, (2) validity criteria, and (3) practicality criteria. Each type is fully defined and developed.

371.

Howell, Margaret A.; Cliff, Norman; and Newman, Sidney H. "Further Validation of Methods of Evaluating the Performance of Physicians." Educational and Psychological Measurement, 20 (Spring, 1960), 69-78.

This article is a further study of the U.S. Public Health Service Efficiency Report, an evaluation instrument for rating the performance of medical care physicians. The report utilizes four types of evaluation methods: (1) forced-choice tetrads, (2) a 10-point scale for rating job proficiency, (3) a 10-point scale for rating personal qualifications, and (4) a 22-item checklist. It was found that the instrument was highly predictive of work performance ratings given to medical interns by both supervising physicians and fellow interns. The validities obtained were unusually high, higher than those for the physician sample on which the report was developed. The forced-choice and checklist sections were found more valid than the other two, and it was concluded that giving equal weight to all sections of the report was appropriate for experienced physicians, while using only the forced-choice tetrads and the checklist was recommended for interns.

372.

Hubbard, John P.; Levit, Edithe J.; Schumacher, Charles F.; and Schnabel, Truman G., Jr. "An Objective Evaluation of Clinical Competence. New Techniques Used by the NBME." New England Journal of Medicine, 272 (June 24, 1965), 1321-28.

This article is a description of the evaluation instruments used by the NBME (National Board of Medical Examiners) for testing physicians' clinical competence. Nine major areas of clinical performance were defined, using the critical incident technique. (Critical incidents totaling 3,300 were collected from 600 physicians.) These include (1) history taking, (2) physical examination, (3) tests and procedures, (4) diagnostic acumen, (5) treatment, (6) judgment and skill in implementing care, (7) continuing care, (8) physician-patient relationship, and (9) taking responsibility.

Three methods of competency testing were then devised. The first uses a motion picture of a doctor interviewing and examining a patient, and tests the student's acuity of observation by asking him to interpret correctly what he has observed and to draw appropriate conclusions. The second is a test of the student's ability to interpret a variety of clinical data. Printed reproductions of roentgenograms, electrocardiograms, tissue specimens and photographs of important physical signs are used. The third test, "programmed testing," is a form of simulated patient management problem in which there is a sequential unfolding of a series of problems requiring step-by-step action. Reliability of these three methods of testing was determined by calculating correlation between half-tests. Overall test reliability was found to be between 0.83 and 0.87. The test was considered to have content validity because it conformed to most of the areas defined by the critical incident study.

373.

Hutchins, Edwin B. The Evaluation of Environmental Determinants. Paper presented at the American Psychological Association meeting in St. Louis, September 3, 1962. Office of Basic Research, Technical Report No. L261. Evanston, Illinois: Division of Education, Association of American Medical Colleges, 1962, 16 pp.

The main purpose of this paper is to describe the sources of variance in 28 medical school environments, and to determine how environment is related to the proportions of graduates produced by the different schools in the different career choice categories. Four types of environmental variables are considered: (1) objective situational determinants (measurable facets which are institutional in character and can be objectively identified--these include school budget, size of faculty, public versus private support, number of out-of-state students accepted, ratio of Ph.D.s to M.D.s on the faculty, faculty-student ratio, and "environmental opportunity for the student to play doctor early in his career"); (2) subjective variables (student report measures representing the student's perception of his environment--this included a 180-item environment inventory); (3) historical variables (such as the proportion of a school's graduates over a 20-year period who later entered academic medicine); and (4) descriptions of the student body *per se* (differential characteristics of the student bodies as a whole--their abilities, personalities, values, interests, etc.).

The factor-analysis of the responses to the environment inventory revealed that schools where students are intrinsically motivated, have opportunities for individual creative activity, are stimulated to be interested in things other than pure medicine, and esteem their schools highly, are schools high in the production of students with research and teaching orientations. These schools also have high faculty-student ratios.

Average MCAT scores for the student body and whether or not the school had a history of producing educators and researchers correlated highest with career choice. Seventy per cent of the variance in career choice could be accounted for in terms of public-versus-private and faculty-student ratio variables. It was found that schools with a strong department of psychiatry produced more students who chose to go into psychiatry, suggesting that contact with a stimulating and reinforcing teacher with whom the student can identify is important in choice of specialty. The opportunity to "play doctor" was found not to be a potent variable.

374.

Isaac, Stephen (with William B. Michael). Handbook in Research and Evaluation. San Diego, Calif.: Robert R. Knapp, 1971.

This handbook is a sensible, well-written, practical reference, with a useful chapter on statistical techniques and the analysis of data. In general the material concerns research more than evaluation.

375.

Kelly, E. Lowell. Assessment of Human Characteristics. Belmont, Calif.: Brooks/Cole Publishing Co. (a division of Wadsworth Publishing Co.), 1967, 114 pp.

Although this book is primarily about psychological assessment (as of personality traits), it does contain three chapters which discuss several aspects of reliability and validity and which consider the role of the human judge in assessment. The topics covered include retest reliability, alternate form reliability, internal consistency, sources of unreliability, validity (consensual, empirical, concurrent, predictive, and construct validity), rating scales, and judges (including characteristics of a good judge).

376.

Kindall, Alva F., and Gatza, James. "Positive Program for Performance Appraisal." Harvard Business Review, 41 (November-December, 1963), 153-60.

The authors offer a step-by-step set of instructions for establishing a program of business management by objectives. The plan embraces the concept of having the individual employee share with management in the responsibility for his job. He assumes responsibility for setting his job goals and for reviewing his performance to determine his effectiveness in achieving the objectives. The article includes a good discussion of the benefits this appraisal method can effect for the subordinate and for the organization.

377.

Kopta, Joseph A. "An Approach to the Evaluation of Operative Skills." Surgery, 70 (August, 1971), 297-302.

Kopta notes that it is difficult to document the learning which takes place in the psychomotor domain, and that deficiencies in the teaching and learning of motor skills are unlikely to be corrected without reliable and systematic feedback. To this end he has developed an observation guide "to monitor surgeon behavior in the operating room" (p. 297). This impressive evaluation instrument has five sections, which are devoted to cognition, attitude, psychomotor skill, terminal result, and critical incidents, respectively. Special emphasis is given to solving the problems of evaluating psychomotor skills. Inter-rater reliability for the instrument, tested on a very small sample, was extremely high, and a single sample check indicated validity.

378.

MacKay, Ruth C. "Evaluation of Faculty and Students--A Means Toward Fuller Communication and Greater Productivity." Journal of Nursing Education, 13 (January, 1974), 3-7.

The author sets forth four general guidelines for evaluation: (1) the purpose of the evaluation as a means of facilitating learning should be known and accepted by both student and teacher; (2) the standards of evaluation should be understood clearly; behavioral goals based on assessed learning needs should be established; (3) standards should be realistic; (4) there should be a specified time period during which behaviors are observed and evaluated.

379.

Mackenzie, Richard S. "Defining Clinical Competence in Terms of Quantity, Quality, and Need for Performance Criteria." Journal of Dental Education, 37 (September, 1973), 37-44.

Mackenzie points out some of the flaws in evaluation as commonly practiced in dental education. He feels in particular that product evaluation is overemphasized and that there is a need to analyze the factors that contribute to variation in the quality of the product. He calls for an emphasis on diagnostic feedback. One should keep in mind the purpose for which degree of excellence is being judged and consider what will be important to the patient; for example, work efficiency should be measured out of concern for cost to patient. This article also contains a general discussion of performance criteria and urges that the major components of learning (stimulus components, mediating responses, and observable responses) be evaluated independently.

380.

Mackenzie, Richard S. "Factors Essential to Evaluation of Clinical Performance." Journal of Dental Education, 38 (April, 1974), 214-23.

This is a discussion of measurement, validity, objectivity, efficiency, and cost, as these factors relate to the evaluation of dentists. It considers matters related to certification and to product evaluation, and makes some very general observations about evaluation, such as that validity depends on purpose.

381.

May, Bella J., ed., Performance Evaluation: Proceedings of a Training Institute. Sponsored by the Department of Physical Therapy and The Department of Occupational Therapy, Medical College of Georgia; supported by Grant Number 1A13 AH00129-01, Division of Allied Health Manpower, Department of Health, Education, and Welfare; October 16-19, 1973), 172 pp.

This Institute, which focuses on the problem of performance evaluation, was the third in a series of institutes devoted to improving the skills of clinical instructors in physical therapy and occupational therapy at the Medical College of Georgia and Georgia State University. The keynote address by Dr. Leon Lessinger stressed the value of criterion-referenced evaluation and the need for a humanistic orientation in education and evaluation. Linda Crocker gave a series of talks on evaluation. Her discussion of the tools of measurement in performance evaluation covers the critical incident technique, the observational rating scale, and simulated Patient Management Problems, mentioning the advantages and disadvantages of each. (A simulated patient management problem written specifically for physical therapists is reproduced on pp. 101-113.) She also spoke on the various types of reliability and validity. In her last talk she made recommendations to the clinical supervisor to improve evaluation with the procedures currently in use, recommendations to university staff to insure proper use of the instruments they send to facilities, and recommendations for those planning to undertake development of a new evaluation program.

Other topics discussed at this Institute were: the necessity of identifying the measurable performance elements of objectives; the establishment of criteria or standards to be used for comparing the student's actual performance with what has been determined to be acceptable, adequate, satisfactory performance; how to confront a failing student; the division of evaluation responsibility between academic and clinical staff; whether or not the American Physical Therapy Association should provide a standard evaluation form; and what information should be provided to the clinical facility by the school about the student they are sending to the facility.

382.

McDaniel, Lucy V. "The Critical Incident Method in Evaluation." Journal of the American Physical Therapy Association, 44 (April, 1964), 235-42.

This is the report on a study of practicing physical therapists in which the critical incident technique was used to compile a list of characteristics descriptive of the ideal physical therapist. Critical incidents were collected from questionnaires which were sent to 1,734 hospitals. The result was the identification of 414 usable critical incidents which were categorized into six areas of behavior. The profile of an ideal physical therapist (pp. 235-36) emerged from the subsequent study of these incidents, and the author feels that the profile offers the most valid criteria available for evaluating physical therapy personnel. It can also be translated into objectives with which to evaluate the effectiveness of professional curriculums or for designing inservice education programs.

383.

McGregor, Douglas. "An Uneasy Look at Performance Appraisal." Harvard Business Review, 50 (September-October, 1972), 133-38. Rpt. (Harvard Business Review, 35 May-June, 1957.)

The author is a strong proponent of "management by objectives," performance evaluation initiated not by management, but by subordinates. The system calls for the subordinate to establish short-term goals for himself--shifting to himself the responsibility for assessing his strengths and weaknesses; his superior's role is one of helping him relate his self-appraisal, specific goals and plans to the functions of the organization.

384.

Metcalfe, David H.; Chir, B.; and Mancini, Joseph C. "Critical Event Outcome Studies Used as a Teaching Tool." Journal of Medical Education, 47 (November, 1972), 869-72.

These authors describe a system devised to teach residents in family medicine how to keep records and cross index them so that their practices generate data as a basis for self and peer review, continuing education, operational planning, and outreach. Essentially the system employs chart review to measure actual care against a profile of the well-managed patient with a certain disease (profiles are derived from a review of the literature). Meetings are held to discuss the disease, the ideal profile, the results of the chart audit, and the problems of treatment. If a physician's care of his patient has been shown to fall short of the ideal he is notified privately. The system serves two purposes: improving patient care, and teaching physicians to evaluate themselves in terms of the quality of care delivered.

385.

Meyer, Herbert H.; Kay, Emanuel; and French, John R. P., Jr. "Split Roles in Performance Appraisal." Harvard Business Review, 43 (January-February, 1965), 123-29.

The authors summarize findings of a study to evaluate the effects of performance appraisals conducted at General Electric. The conclusions drawn were four-fold: (1) annual performance appraisals seldom motivate improved performance (in fact, employees made less effort to improve in areas criticized); (2) criticism and coaching are more effective as motivation for improvement if offered on a regular day-to-day basis; (3) criticism should be avoided and replaced with goal setting; (4) separate appraisals must be held for different purposes, i.e. employer should not be discussing performance for the purpose of improving performance and making decision on a salary action case during one appraisal session.

386.

National League for Nursing. Evaluation: An Objective Approach. Report of the 1971 Workshops of the Council of Diploma Programs. New York: National League for Nursing, 1972, 49 pp. (NLN pub. no. 16-1446.)

This document contains four workshop presentations on evaluation. These are summaries of some of the generally-accepted conclusions about evaluation, and they discuss such topics as relating evaluation to objectives, grading, level of competency, the process of feedback, anecdotal records, rating scales, peer ratings, self-evaluation, the purposes of evaluation, and sources of error in evaluation. Evaluation of the student is the main focus.

387.

National League for Nursing. Evaluation: The Whys and the Ways. Report of the 1964 Regional Workshops of the Council of Member Agencies of the Department of Diploma and Associate Degree Programs. New York: National League for Nursing, Department of Diploma and Associate Degree Programs, 1965, 66 pp. (NLN pub. no. 16-1172.)

This National League for Nursing pamphlet contains six lectures on educational evaluation presented at various regional workshops of the Diploma and Associate Degree Programs in Nursing. Their emphasis is on design of the total evaluation program, stressing the necessity for evaluation in nursing education. Some of the topics touched upon by the various lecturers were: philosophic and pragmatic aspects of evaluation; evaluation as the application of the scientific method to educational phenomena; the evaluative roles of the administrator, the faculty, the student, and the evaluation consultant; reasons for program evaluation and the need for faculty involvement in it; and institutional evaluation.

388.

Newman, Sidney H.; Howell, Margaret A.; and Harris, Frank J. "Forced Choice and Other Methods for Evaluating Professional Health Personnel." Psychological Monographs, 71, Whole No. 439, 1957, 27 pp.

This is a report on a U.S. Public Health Service study to compare various methods of performance evaluation. The authors support their preference for the forced-choice technique with this presentation of their findings on the following different evaluation methods: (1) forced-choice tetrads, (2) a 10-point scale for rating job proficiency, (3) eight 10-point scales for evaluation of personal qualifications, (4) a 22-item checklist developed from an efficiency report, (5) eleven 5-point rating scales for evaluating performance in the Public Health Service, and (6) narrative comments. The forced-choice method was judged to have higher validity than any of the other methods, with validity coefficients higher when work performance was the criterion rather than personality. Rating scales and narrative comments were as adequate as any techniques other than forced-choice.

389.

Payne, David A. "A Perspective on Educational Assessment." The Assessment of Learning: Cognitive and Affective. Lexington, Mass.: D. C. Heath and Co., 1974, pp. 3-23.

This chapter in Payne's textbook written for public school teachers draws upon the general literature on educational evaluation. It includes a list of parallel elements in instruction and evaluation which make them effective, and discussions of curriculum evaluation and accountability.

390.

Remmers, Hermann Henry. "Rating Methods in Research on Teaching." Handbook of Research on Teaching. Edited by N. L. Sage. Chicago, Ill.: Rand McNally and Co., 1963, pp. 329-78.

Remmers emphasizes that the measuring device of a rating scale is not the paper form, but rather the individual rater. Rating scales should be judged by their objectivity, reliability, sensitivity, validity, and utility. Various kinds of rating scales are described in this section which basically follows Guilford, but includes a review of other literature, particularly on forced-choice rating scales. "Semantic differential" as a sophisticated use of graphic rating scales is discussed in some detail, as are the virtues and defects of the Q-technique. A self-anchoring rating scale is described which requires individual interviewing, content analysis, and coding. The literature on rating methods as applied to teaching is discussed, and merit rating and student ratings of teachers are covered. The author considers the question of what content should be covered in rating scales and offers three possible bases for content: (1) a systematic conception of teaching; (2) the consensus of competent judges; and (3) critical incidents. Four types of bias are mentioned as operating in observations recorded by means of rating scales: (1) opportunity bias (possible undersampling); (2) experience bias (varying degrees of experience in the persons being rated); (3) criterion distortion (the possibility that if several similar correlated behaviors are included, certain behavior may be weighted disproportionately); and (4) rating biases (such as halo effect).

391.

Scriven, Michael. "The Methodology of Evaluation." Perspectives of Curriculum Evaluation. Edited by Ralph Tyler; Robert Gagné; and Michael Scriven. AERA Monograph Series on Curriculum Evaluation, Number 1. Chicago, Ill.: Rand McNally and Co., 1967, pp. 39-83.

This paper attempts to show and reduce some of the philosophical and practical deficiencies of current conceptions of the evaluation of educational "instruments" such as curriculums, teachers, and programmed texts. This landmark theoretical study of curriculum evaluation presents a complex model of adequate evaluation study which covers the following topics: goals versus roles of evaluation; formative and summative evaluation; professional versus amateur evaluation; evaluation studies versus process studies; evaluation versus estimation of goal achievement; intrinsic versus pay-off evaluation; practical procedures for mediated evaluation; the possibility of pure pay-off evaluation; comparative versus non-comparative evaluation; practical procedures for control group evaluation; criteria of educational achievement for evaluation studies; values and costs; and explanatory evaluation.

392.

Stanley, Julian C., and Hopkins, Kenneth D. Educational and Psychological Measurement. Englewood Cliffs, N.J.: Prentice-Hall, 1972, 520 pp.

This book, primarily about testing, appears to be aimed chiefly at the public school teacher. It does, however, contain a chapter on assessment of the affective domain and a chapter on grading. The authors discuss some of the problems of affective measurement (fakability, self-deception, semantics, and criterion inadequacy), and urge that affective assessment not be neglected: if you have affective objectives you need to find out whether or not they are being achieved. The techniques discussed for measuring affect are Thurstone, Likert, rating, and semantic differential scales, and Q-sort technique. The authors appear to favor somewhat traditional grading practices and strongly oppose the abolition of grades.

393.

Stufflebeam, Daniel L. "Alternative Approaches to Educational Evaluation: A Self-Study Guide for Educators." Evaluation in Education: Current Applications. Edited by W. James Popham. Berkeley, Calif.: McCutchan Publishing Corp., 1974, pp. 95-143.

This article presents in a self-instructional format a summary of two approaches to evaluation: the conceptual frameworks of Michael Scriven and Daniel L. Stufflebeam. The material on Scriven is a summary of his ideas on goals versus roles of evaluation, intrinsic versus pay-off evaluation, and goal-free evaluation, and it includes a description of the Pathway Comparison Model, a checklist of steps for evaluating programs. Stufflebeam's approach, developed by the Phi Delta Kappa National Study Committee on Evaluation, is called the CIPP Evaluation Model because it consists of four types of evaluation: evaluation of Context, Input, Process, and Product. The CIPP model is designed to assist in both decision making and the determination of accountability.

394.

Tate, Barbara L. Test of a Nursing Performance Evaluation Instrument. New York: National League for Nursing, Research and Studies Service, 1964, 99 pp. (NLN pub. no. 19-1121.)

This pamphlet is a description of the trial use of a rating form to determine its practicality, validity, and reliability. A preliminary trial and three subsequent trials were conducted in three different hospitals, using the form to evaluate the performance of staff nurses on the nursing service. It was concluded that the form was practical despite some complaints by head nurses that it was too time-consuming. Validity was not formally measured, but all items save one had face validity for all concerned. Two of the scales had apparently adequate reliability, but the reliability of the other three scales was questionable. The construction of the instrument and orientation to its use are also described. Reprints of journal articles about the construction of the rating scale are appended.

395.

Thorndike, Robert Ladd, ed. Educational Measurement, 2nd ed. Washington, D.C.: American Council on Education, 1971, 768 pp.

Though primarily about testing, this large anthology does contain some information useful in evaluating performance. There is a didactic and informative chapter on "Performance and Product Evaluation" by Robert Fitzpatrick and Edward J. Morrison (pp. 237-270), which reviews some of the literature on simulations, situational tests, in-basket tests, and work-sample tests, and discusses the development and administration of performance tests. There is a whole section on measurement theory, which contains rather technical articles on "The Nature of Measurement," "Reliability," and "Test Validation." The chapter on "Measurement in Learning and Instruction," by Robert Glaser and Anthony J. Nitko (pp. 625-670), touches upon such topics as the analysis and definition of performance domains, placement and diagnosis, criterion-referenced testing, and formative evaluation. The final chapter, by Alexander W. Ostin and Robert J. Panos (pp. 733-751), reviews some of the conceptual and methodological issues concerning "The Evaluation of Educational Programs." Theirs is an "output, input, and operation" approach.

396.

Thorndike, Robert Ladd, and Hagen, Elizabeth P. Measurement and Evaluation in Psychology and Education, 3rd ed. New York: John Wiley and Sons, 1969, 705 pp.

This is a general introductory text on measurement, with the major part of the book devoted to testing in the classroom. Chapter vi, "Qualities Desired in any Measurement Procedure," discusses reliability, validity, and practicality in a fairly comprehensive way. Chapter xii, "The Individual as Others See Him," contains a good, lengthy discussion of rating scales, which notes some of the problems in obtaining sound ratings and makes suggestions for improving the effectiveness of ratings. Chapter xiv, "Behavioral Measures of Personality," offers some general remarks about systematic observation and comments on anecdotal records, but it focuses primarily on observation procedures developed in connection with studies of young children. Situational tests are mentioned.

397.

Uhl, Norman P. "Identifying College Goals the Delphi Way." Administration and Organization Topical Papers and Reprints #2. National Laboratory for Higher Education, Durham, N.C., n.d.

The Delphi method for opinion gathering allows for exchange of information without bringing participants together in time-consuming or opinion-distorting face-to-face meetings. The author outlines how it has been applied in polling and coordinating the views of administrators, faculty, students, trustees, etc. Each participant is first asked to complete an "opinionnaire" on specific topics, evaluating his opinions based on a given criterion. He later receives a summary of all other responses with a request that if his is different he must explain why, or revise his opinion. As a final mailing the participant receives an updated summary--including minority opinions--and he either repeats or revises his opinion. This controlled feedback on the responses of other participants provides anonymity and minimizes the influence of personal or political interests.

398.

U.S. Department of Health, Education, and Welfare, Public Health Service. Proceedings of the Regional Medical Programs National Conference and Workshop on Evaluation, 1970. "An Approach to Evaluation for the Regional Medical Program," by Donald A. Schon. DHEW Publication No. (HSM) 71-7010, Washington, D.C.: Government Printing Office, 1972, pp. 1-20.

Schon's discussion of evaluation centers around the distinction he makes between "systems rationale" (a set of formal objectives, operations for achieving them, and methods for appraising the effectiveness of operations in achieving objectives) and "the discovered system" (the informal, homeostatic structure of an organization or program, which results from the fact that social systems do not behave exclusively in terms of the rational purposes assigned to them). Evaluation is usually thought of from the point of view of a "rational manager" for whom the systems rationale is fixed and given. "Evaluation tends to become an auditing process in which a third party assesses behavior in terms of systems rationale and sends information towards the top of the system for justification and control." Schon argues that this may constrain freedom of action, responsiveness and creativity which can exist better in the discovered system. He wants program evaluation to take into consideration the fact that within any program the rational manager's model and the discovered system coexist. He also points out that opportunities for learning exist primarily in the discovered system.

399.

U.S. Department of Health, Education, and Welfare, Public Health Service. Proceedings of the Regional Medical Programs National Conference and Workshop on Evaluation, 1970. "Measuring Changes in Clinical Performance," by B. J. Andrew. DHEW Publication No. (HSM) 71-7010, Washington, D.C.: Government Printing Office, 1972, pp. 55-59.

This is a product of a workshop on measuring changes in behavior. A general discussion of what is involved in measuring clinical performance is followed by a very general review of some of the literature and a selected bibliography. The author presents the item-by-item list of activities developed by the workshop to define the steps of a clinical problem-solving process. About the evaluation of clinical activities he writes, "The measurement of clinical performance can focus either on the entire problem-solving process or solely on the frequency with which certain behaviors within the process are observed." The validity of the measurement depends on the quality of the instrument devised to record the problem-solving behavior. The factors to be considered, the procedures to follow, and several types of clinical performance measurement are all included in these guidelines for evaluators.

400.

Wilhelms, Fred T. "Evaluation as Feedback." Evaluation as Feedback and Guide. Edited by Fred T. Wilhelms. Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1967, pp. 2-17.

This chapter, in which the editor presents a general introductory description of evaluation uses, defines several criteria for determining an evaluation system's effectiveness: "Does it deliver the feedback that is needed, when it is needed, to the person or groups who need it?" The user must decide if the evaluation (1) facilitates self-evaluation, (2) encompasses every objective valued by the school, (3) facilitates learning and teaching, (4) produces records appropriate to the purposes for which records are essential, and (5) provides continuing feedback into larger questions of curriculum development and educational policy.

401.

Williamson, John W. "Assessing Clinical Judgment." Journal of Medical Education, 40 (February, 1965), Special Issue, 180-87.

The author describes a technique which uses a pencil and paper test of patient-problem simulations with which to measure clinical judgment. On the basis of information the physician receives in the introduction to the patient problem, and throughout the subsequent steps of his diagnosis, he selects the procedures which lead, in a diagnostic progression of selected results, to the solution of his patient's problem. He is graded on the efficacy of his selections; his diagnostic and therapeutic strengths are identified. The information thus obtained can be applied to designing and evaluating the clinical program.

402.

Williamson, John W., and McGuire, Christine. "Consecutive Case Conference: An Educational Evaluation." Journal of Medical Education, 43 (October, 1968), 1068-74.

This article is the report of a pilot study designed to evaluate the effectiveness of an instructional technique known as the Consecutive Case Conference (CCC). A CCC is a hospital staff meeting in which a panel of outside specialists analyzes the charts of ten patients who have been consecutively discharged, each with a particular diagnosis made by staff physicians. Staff members are thus afforded the opportunity to evaluate their past performance and to improve their clinical decision making by comparing their own diagnoses with those made by experts. The study was an effort to show (1) that either method of instruction, CCCs or lectures, would result in improved clinical decisions by participants, or (2) that the CCCs would prove to be a superior technique. Neither hypothesis could be supported, as no significant change in clinical judgment as measured by Patient Management Problems could be documented for either method. In addition, it was found that none of the three groups studied in the test achieved better than 50 per cent agreement with expert opinion about the management of problems as presented on the tests.

403.

Wingard, John R., and Williamson, John W. "Grades as Predictors of Physicians' Career Performance: An Evaluative Literature Review." Journal of Medical Education, 48 (April, 1973), Part 1, 311-22.

This article is a review of the literature from 1955-1972 relating undergraduate grades to subsequent career performance in medicine and other professional areas. Little concrete information exists on attempts to correlate medical training with post-academic performance, not because of an inability to obtain data but because of the paucity of such investigations. The few available research findings indicate little or no correlation between academic and professional performance.

The authors recommend that techniques to assess the product or outcome of medical education need to be developed, and that it should not be assumed that grades predict career performance. Definitions of what grades do measure need to be clarified. Wingard and Williamson suggest that various types of performance should not be lumped together for one value judgment, but rather that a single grade should be broken into a spectrum of components, e.g., knowledge, skills, interests, attitude, understanding, etc., each to be graded separately. The profile of the student should reflect both strengths and weaknesses.

FOR OTHER ENTRIES *related to evaluation see also:*

41, 113, 114, 117, 162, 164, 175, 186, 233, 238, 240, 247, 268, 275, 279, 284, 293, 299, 312, 323, 326, 557.

404.

Barbee, Robert A.; Feldman, Sol; and Chosy, Louis W. "The Quantitative Evaluation of Student Performance in the Medical Interview." Journal of Medical Education, 42 (March, 1967), 238-43.

The authors report the results of the initial phase of a long-term study being conducted at the University of Wisconsin Medical School. The first two and final two patient interviews done by ten second-year medical students in an introductory course in clinical medicine were audiotaped, and each tape was independently evaluated at least once by each of four raters, all faculty members in the Department of Medicine. The evaluation form had two major sections, one dealing with the completeness of the data obtained in the history, and the other with the technique by which those data were obtained. Three of the four raters were trained and one was not, so as to serve as a control.

The most important findings were as follows: (1) only the trained raters achieved significant inter-rater agreement; (2) less agreement was achieved when communication and the doctor-patient relationship were being rated; (3) students were rated higher on their final interviews than on their first interviews, though the raters were not told which was which; (4) when some of the tapes were re-rated by all the raters six months later, the previous ratings were not re-duplicated successfully.

405.

Berner, Eta S.; Hamilton, Lewis A.; and Best, William R. "A New Approach to Evaluating Problem-Solving in Medical Students." Journal of Medical Education, 49 (July, 1974), 666-72.

This article describes the "sequential management problem" (SMP), a modification of the problem-solving method of evaluation. The authors detail the process of evaluation using the "SMP." Essentially the differences and advantages over other methods are: (1) the student is given more frequent feedback at different stages of his management plans; and (2) errors are not cumulative as in "patient management problems" (PMP).

406.

Bull, G. M. "An Examination of the Final Examination in Medicine." Lancet, 271 (August 25, 1956), 368-72.

This article reports the results of some investigations of the "efficacy" of the final examination in medicine at Queen's University of Belfast. Much of the discussion refers only to the marking of paper and pencil tests, but marks on the clinical part of the final exam are also discussed. To determine the examiner's contribution to variance in marks, examiners worked in pairs while observing students working with patients, each member of the pair allocating marks independently and trying to avoid influencing each other. Correlations between the marks of each member of the pair were "encouragingly high," averaging 0.74. The correlations between different parts of the exam were also calculated, a different pair of examiners and a different patient being involved for each part, and moderately good agreement was found between the two sets of examiners (average r = 0.59). The author concluded that the problem of different patients for different students is not seriously affecting the results of the exam.

A further "simple pilot study" suggested that the ability to express oneself ("power of expression") might be important to passing the exam, particularly the orals section.

407.

Chuan, Helen. "Evaluation by Interview." Nursing Outlook, 20 (November, 1972), 726-27.

This article describes an evaluation instrument devised by a nursing instructor for use with beginning-level clinical students "to determine how well students understood and were using the nursing process." The instrument consisted of a questionnaire used as a basis for a structured interview with the student; the questions all related to the student's care for one patient. Scoring and grading took place after the interview, which was recorded, but basis and criteria for scoring and grading are not presented. Method was used primarily as a teaching tool and not as a grading process.

408.

Cline, Marvin G. "A Film Test of Clinical Skills in Medical Students." Journal of Medical Education, 36 (August, 1961), 908-13.

Objective tests based on sound-color films which were made of "highly planned and realistic situations in medicine" were administered to third- and fourth-year medical students and general practitioners. These films showed physicians interviewing and examining actual unrehearsed, hospitalized patients.

Test results showed high reliability coefficients. Validity was indicated by the fact that scores for each of the three groups varied directly with the amount of experience of the group. Correlations between an individual's scores on different film tests were low, which the author attributes to uneven development of skill on the student's part. The tests did not discriminate within the middle level of skills measured as well as it did at the lower levels.

409.

Colmore, John P. "Evaluation of Daily Student Performance." Journal of the American Medical Association, 198 (October 17, 1966), 293-95.

This study reviewed the results of an evaluation of eight successive classes of senior medical students in the Department of Medicine at the University of Oklahoma Medical Center, to see whether evaluation of daily performance in the outpatient teaching clinic was a predictor of performance on the final examination. The performance of top level students was consistent in daily work and in the exams, but the exam grades of most students correlated very poorly with the supervisor's evaluation of performance in the clinic. This finding raises the question of which grade is more predictive of performance of the physician after completion of his training. (It should be noted that these exam grades were normative and that the form used to rate clinical performance was very general--its items were not behaviorally stated.)

410.

Council of Physical Therapy School Directors. Principles and Practices of Evaluation and Publication. Proceedings of the Annual Institute. Philadelphia, Pa., November 12-16, 1962, 202 pp. (Only pp. 76-159 are annotated.)

In these proceedings Christine H. McGuire touches on several topics of interest. She describes simulated patient management problems, the National Board of Medical Examiners practical exam and the rating form used by the examiner, and the NBME films used to test the students' skills of observation. She also states that she feels traditional grades should be abandoned. A detailed profile should take the place of a letter grade, and students should be certified as having done satisfactory or unsatisfactory work, with only a few designated as outstanding.

Four groups of participants reported the results of their discussions of methods of evaluating clinical skills.

The other content of this Institute was not relevant to clinical education.

411.

Cowles, John T. "A Critical-Comments Approach to the Rating of Medical Students' Clinical Performance." Journal of Medical Education, 40 (February, 1965), Special Issue, 188-98.

This study is an analysis of the comments made on rating forms used over a period of three years in the University of Pittsburgh Department of Medicine to rate the clinical performance of medical students. Comments were individually rated for quality of performance on a descending scale of 1 to 6 and placed into one of the following categories: (1) knowledge and understanding of facts and theory; (2) rapport with patients; (3) assumption of responsibility for care and follow-up; (4) accuracy and thoroughness of observation, physical skills; (5) diagnostic skills; (6) conscientiousness, recognition of limitations; (7) motivation; (8A) general intelligence; (8E) maturity; (8G) general miscellaneous. Disregarding (8G), categories receiving the largest number of comments were (4) and (7). In performance rating, comments in categories (1), (4), (6) were evenly distributed throughout scale; in categories (2), (3), (5) comments were very favorable or very unfavorable; in category (7) comments were mostly favorable. In evaluating the study an effort was made to discover what kinds of comments were most reliably rated and to evaluate the evaluators.

412.

Cowles, John T., and Kubany, Albert J. "Improving the Measurements of Clinical Performance of Medical Students." Journal of Clinical Psychology, 15 (April, 1959), 139-42.

The authors describe the development and use of the Clinical Performance Record, an evaluation instrument they used at the University of Pittsburgh School of Medicine to rate the clinical performance of third- and fourth-year medical students. Their purpose, to improve measurement of clinical performance, stems from their search for better ways to validate medical school selection techniques. Here they report on how they drew on the expertise of 12 medical school faculty members to determine the most important characteristics for a student to possess or acquire in preparation for general practice, and how they developed a rating form in which each student observed in the clinic could be rated on the degree to which he possessed each of the characteristics. The article reports good results from the use of the instrument, which appears to have concurrent validity in realtion to major subjects of the fourth year of medical study, and produced average ratings with a reliability of +.50 (significant at the .01 level).

413.

Crocker, Linda; Muthard, John E.; Slaymaker, Jane E.; and Samson, Louise. "A Performance Rating Scale for Evaluating Clinical Competence of Occupational Therapy Students." American Journal of Occupational Therapy, 29 (February, 1975), 81-86.

The authors report on a study to determine the validity and reliability of the Field Work Performance Report (FWPR), a 53-item rating scale for evaluating occupational therapy students. Their findings indicated that concurrent criterion-related validity, inter-rater reliability, and internal consistency for this evaluation instrument were all good. The FWPR rating scale measures five major areas of clinical performance: (1) data gathering, (2) treatment planning, (3) treatment implementation, (4) communication skills, and (5) professional characteristics. Each item is a description of an individual observable behavior of competent clinical performance. Using a group of 934 students in field work in 1972 in the U.S., the authors compiled FWPR profiles of each student, by two staff therapists, who also rated each student on his suitability for hiring, then on a composite FWPR and on a predecessor of the FWPR form. The article provides an account of the analysis performed by the authors which led them to a favorable assessment of the rating form.

414.

Crosbie, Stanley, and Gilberstadt, Harold. "Contrasts Between Several Means of Appraising Physicians." Journal of Medical Education, 36, Part 1, (October, 1961), 1310-15.

These authors report on a study in which four different methods of evaluating the competence of first-year medical residents were compared: (1) ranking by supervising physicians, (2) ward-performance rating by nurses, (3) patient evaluations, and (4) independent chart review. Ratings of competence by patients and staff corresponded to ratings by chart review at a better than chance level. Supervisory staff evaluations showed a high level of agreement with nurses' evaluations, and staff evaluations were considered slightly preferable to chart ratings. It was felt that a combination of staff evaluations with chart ratings might be optimal. Patients' evaluations did not agree with staff evaluations or chart ratings: patients were probably indicating personal reactions of liking rather than trying to evaluate.

415.

Dickinson, Ruth; DiMarino, Jean; and Pfitzenmaier, Joan. "A Common Evaluation Instrument." Physical Therapy, 53 (October, 1973), 1075-80.

The authors suggest (for general adoption) a two-part evaluation instrument designed for narrative reporting of characteristic behavior of the student physical therapist. Part I concerns professional attitudes and relationships; Part II deals with mastery of clinical skills. In testing the form the need for detailed analysis of goals to be achieved in specific clinical settings was found to be of paramount importance. Rewritten, with clearly defined objectives (for use in orientation, mid-evaluation, and final evaluation), the form fills the need for evaluating any level of physical therapy student in a clinical education program.

416.

"An Evaluation Design for Clinical Training." Trends in Medical Education. Newsletter, Office of Medical Studies, School of Medicine, University of North Carolina at Chapel Hill, February, 1975.

The design for evaluation of clinical training described in this article was approved by faculty members representing six clinical disciplines in medical education. It reflects a single evaluation policy which was agreed upon for use by all the clinical areas at the University of North Carolina Medical School. It was felt that clinical evaluation should serve the two basic functions of (1) internal quality control over technical skills not tested on certification examinations, and (2) serving faculty and students as a form of improving communication which should enable them to improve their teaching and learning. Final grades in all courses comprise cognitive, technical and clinical achievement and performance.

417.

Fidler, Gail S. "A Guide to Planning and Measuring Growth Experiences in the Clinical Affiliation." American Journal of Occupational Therapy, 18 (November-December, 1964), 240-43.

The author of this article was writing as clinical coordinator of the master's degree program in psychiatric occupational therapy at New York University. She lists the objectives of the program's clinical affiliation, and reprints the "Guide to the Evaluation of Student Functioning," which serves for both self- and supervisor evaluation. Emphasis in the clinical experience is on growth as a person, use of self in therapy, and realization of potential. The guidelines for evaluation call for student and supervisor to rate students on a scale of 1 to 7 in a total of 16 categories, a comprehensive list of descriptive items encompassing all areas stressed in the objectives. The guide does not make clear, however, how to use the scale to measure the qualities (which are not behaviorally stated).

418.

Geertsma, Robert H., and Chapman, John E. "The Evaluation of Medical Students." Journal of Medical Education, 42 (October, 1967), 938-48.

This article describes a system of evaluating medical students, in all their major pre-clinical and clinical courses. The system uses ratings of superior, satisfactory, or unsatisfactory on eleven areas of performance, on personal characteristics, and on more general dimensions of the students' performance, or their probable performance in given situations. All the evaluations for 180 students were subjected to factor analysis of the ratings, which were found to polarize into a cognitive and a non-cognitive factor. Instructors had a tendency to give unsatisfactory ratings on cognitive dimensions and superior ratings on non-cognitive dimensions (where an unsatisfactory rating might be harder to defend). Clinical instructors were more favorable in their evaluations than pre-clinical faculty. Evaluators at the University of Kansas School of Medicine, where this study was carried out, felt the system was preferable to using letter grades or numerical standings. A complete discussion of the results and how they reached them is presented. They recommended use of the critical incident method to derive a revised set of dimensions for evaluating non-cognitive performance.

419.

Glass, Robert L. "Evaluation of Student Clinical Performance." Journal of Dental Education, 29 (September, 1965), 256-59.

This article describes an instrument for rating dental students on "clinical achievement" and "professional attributes." Neither of these categories is broken down into specific behaviors, items, or subcategories: only one rating is given for each. A six-point scale is used for rating clinical achievement according to whether it is above or below "the standard expected of a dental student." A similar four-point scale is used for rating professional attributes.

420.

Gough, Harrison G.; Hall, Wallace B.; and Harris, Robert E. "Evaluation of Performance in Medical Training." Journal of Medical Education, 39 (July, 1964), 679-92.

This article reviews and discusses some of the literature relating to the reliability of Grade Point Average, faculty ratings, and peer evaluation as meaningful indices of the performance of medical students. The authors seek to identify the sources of criterion information for predictive studies of performance. Their conclusion is that past research indicates that GPA, faculty ratings, and peer evaluation are all adequately reliable. In addition, the article reports on the authors' own study of 81 medical students in which they were seeking intercorrelations among these three types of criteria. They report "general communality" among the sources. Correlations showed close but not complete agreement.

421.

Graham, John R. "Systematic Evaluation of Clinical Competence." Journal of Medical Education, 46 (July, 1971), 625-29.

This article describes a form used by the psychiatry department at the University of New Mexico to evaluate clinical competence. It has nine sections: (1) attainment of global objectives, (2) characteristics descriptive checklist, (3) clinical performance checklist, (4) narrative section for critical incidents, (5) suggestions/comments, (6) career choice recommendations, (7) degrees of change, (8) other comments, and (9) final evaluation (pass, fail, superior). The form is distributed to students for self-evaluation at the beginning of their clerkships, and again at the end. Self-evaluations are compared with teachers' evaluations using the same form. The information obtained can be used to help students assume responsibility for self-education and continued learning, or even to point out the need for therapy.

422.

Helfer, Ray E. "Peer Evaluation: Its Potential Usefulness in Medical Education." British Journal of Medical Education, 6 (September, 1972), 224-31.

This article deals with the basic concepts of peer evaluation and summarizes the ways in which peer evaluation has been used, emphasizing studies in the field of medical education. Helfer briefly reviews some of the literature on the characteristics of a good judge of another's performance, the construction of rating scales, rater error, and reliability and validity, all as they relate to peer evaluation. A suggested peer rating form for medical students is provided which evaluates the following factors: doctor-patient relationship, responsibility as a physician, emotional stability, and overall competence.

The author cautions against using peer evaluation if another form of evaluation is more reliable and valid, as in the case of factual recall and problem-solving. The data presented suggest that medical students will accept peer evaluation if it is presented non-threateningly. Helfer feels that peer evaluation shows great promise in measuring interpersonal relationships.

423.

Herzberg, Frederick; Inkley, Scott; and Adams, William R. "Some Effects on the Clinical Faculty of a Critical Incident Study of the Performance of Students." Journal of Medical Education, 35 (July, 1960), 666-74.

"This paper is concerned with the many secondary gains that appear to have resulted from a pilot critical incident study of student performance at the Group Clinic of the Western Reserve University School of Medicine." The most important gain was an improved understanding of the process of performance evaluation among the faculty. The authors recommend a shift away from the weaknesses and pitfalls inherent in traditional methods of evaluating student performance, the resultant low reliability, and the general disrepute of most efforts. They suggest that the use of the "critical incident" evaluation technique can train teachers to make valuable, systematic performance assessments. In this study using critical incident procedures the authors reported significant changes in faculty attitude and approach to evaluation. Instructors learned to disregard general impressions, to consider the specific incident--each a single test of performance--and to make the final evaluation of the student based on the accumulative record of his separate performances.

The critical incident technique reduces the difficulty of making overall value judgments (and confronting the question of what constitutes a global effective practice) to a workable process of describing single performances, upon which judgmental agreement can be established.

424.

Hess, Joseph W. "A Comparison of Methods for Evaluating Medical Student Skill in Relating to Patients." Journal of Medical Education, 44 (October, 1969), 934-38.

This article describes two methods used to evaluate videotaped interactions in the clinic between medical students and patients. The systems differed in their basic formats. It was found that the system which used the "interaction analysis" format was the more reliable. This required that raters classify single units of student behavior under one or more of eleven categories, e.g., "verbally invites expression of patient's concerns." The second method contained descriptions of visible behaviors and required that raters make global judgments. It was concluded that the design of a rating system is important to its reliability and effectiveness, and that interaction analysis is useful in providing corrective feedback to students.

425.

Hinz, Carol F., Jr. "Direct Observation as a Means of Teaching and Evaluating Clinical Skills." Journal of Medical Education, 41 (February, 1966), 150-61.

Described in detail in this article is a method of teaching and evaluation which involves direct observation of medical students as they take patient histories and perform physical examinations. The author recounts a study in which the various steps of a diagnostic workup with suitability for testing by observation were rated on a four-point scale, according to whether the steps were performed competently or incompetently, appropriately or inappropriately. Senior residents were trained and used as bedside raters.

The overall conclusions were favorable. Direct observation as a quantitative device for grading purposes or to quantitatively assess teaching programs is limited, but direct observation is a potentially useful tool for qualitative evaluation of student performance. Findings indicate that students welcome the tutorial assistance; instruction can be individualized; aspects of performance are revealed that are not obvious in ward rounds; and faculty is able to witness and remedy deficiencies in student performance or in teaching.

426.

Hobson, Pamela, and Holloway, P. J. "Continuous Assessment of Dental Students." British Dental Journal, 135 (September, 1973), 200-04.

This article describes a "monitoring" system used instead of a program of formal assessment to grade a student's progress throughout the years of his clinical training in British dental schools. The term "continuous assessment" actually applies to a three-times-a-year evaluation in which the student is rated excellent, satisfactory or causing concern in each of three domains (cognitive, affective, and psychomotor) in all his courses.

The system is designed to keep the student informed of faculty assessment of his progress; students who need counseling can be identified.

427.

James, D. E., and Loveland, Marion K. "Health Visitor Students: Assessing Practical Work in Surrey." Nursing Times, 69 (May 3, 1973), 563-64.

Students working toward a health visitor diploma at the University of Surrey do fieldwork in the county of Surrey. This article describes research aimed at appraising the assessments of students being made by fieldwork instructors. University staff (academic instructors) were asked to list the aspects of performance which they felt should be evaluated; fieldwork instructors were asked to list the main qualities they looked for in students in their charge and to list how these qualities might show themselves. To make assessment more objective, each of the qualities listed by the fieldwork instructors was converted into five graded statements. A rating form was thus devised and was amended after some use.

428.

Johnson, Dale M., and Wilhite, Mary J. "Reliability and Validity of Subjective Evaluation of Baccalaureate Program Nursing Students." Nursing Research, 22 (May-June, 1973), 257-62.

The purpose of the study analyzed by these authors was to determine whether subjective ranking of a group of junior nursing students (based on faculty's belief in the students' potential to meet program objectives as graduate nurses) would correlate with an objective teacher-made test and with National League of Nursing achievement tests. A related purpose was to explore the reliability of independent subjective rankings by faculty. The authors claim in this article that they established reliability and validity for the subjective ranking of students based on program objectives. It might be pointed out that their study is based on a very small number of students, and the rank order correlation they found is low, even though it is significant.

429.

Kennell, John H.; Tempico, Caroline R.; and Wile, Marcia Z. "Self-Evaluation by First-Year Medical Students in a Clinical Science Programme." British Journal of Medical Education, 7 (December, 1973), 230-38.

This article describes an innovative use of self-evaluation designed to enhance medical students' professional development and to facilitate the formal evaluation process (both formative and summative). The self-evaluation is not considered a substitute for evaluation by the students' supervisors, but rather an addition to it. Students each worked under the supervision of two tutors, whose role in the self-evaluation process was to confirm or modify each student's own impressions of his attitudes, behaviors, and performance. The article describes the guidelines by which the self-evaluation process was structured and the procedure that was followed. One author of the article undertook a study to investigate the students' "retrospective assessment" of the self-evaluation experience and its effects. All of the students who had participated (17) were interviewed. Responses were mixed.

430.

Kern, Barbara, and Mickelson, John. "The Development and Use of an Evaluation Instrument for Clinical Education." Physical Therapy, 51 (May, 1971), 540-45.

The evaluation instrument described in this article was designed to assess student performance in the clinical setting based on a rating scale of levels of supervision required for the student to meet the objectives defined for his clinical education. Faculty members agreed to define objectives in behavioral terms (that is, the overt activity the student is expected to display), and three levels of required direction were the criteria for judgment: guidance, supervision, assistance. The instrument also provides feedback about the effectiveness of program and curriculum.

431.

King, Helen M. "Ward Reports: An Effort to be Fair." Nursing Times, 64 (February 9, 1968), 21-24.

This article describes the development of a rating form designed by a group of nurses to replace the narrative ward reports which they had been making without guidelines. The rating form has 25 items covering five areas: application to work, quality of work, attitude to patients, attitude to co-workers, and professional behavior. Each item consists of two statements, one describing positive behavior and one describing negative behavior. The rater indicates that either the positive or negative statement applies, that the nurse tends toward the positive or the negative, or that the nurse is average. The instructions to raters are good.

432.

King, Jacqueline. "Use of the Critical Incident Technique in a Physical Therapy Curriculum." Unpublished master's thesis, Stanford University, 1968.

The author of this thesis presents an excellent review of the literature on the critical incident technique; Flanagan's work in particular is discussed in great detail. Literature pertaining to the various applications of the critical incident technique in education is reviewed, as is literature about its use in the medical field. McDaniel's study is summarized. Several studies are cited which indicate that different people judge performance by different standards; e.g., doctors and patients look for different qualities in a nurse.

In her own study, King collected 229 usable critical incidents from 21 clinical affiliations of Stanford University. Each incident was classified by two raters as it related to one or more of the 20 categories on the Stanford University Student Evaluation Form. Two examples of effective and two examples of ineffective behavior were then listed for each of the 20 categories, and from this list profiles of an effective and an ineffective physical therapy student were drawn.

433.

Klein, Robert H., and Babineau, Raymond. "Evaluating the Competence of Trainees: It's Nothing Personal." American Journal of Psychiatry, 131 (July, 1974), 788-91.

The focus of interest in this article is on the emotional involvement of student and evaluator during the evaluation process. The authors believe the first prerequisite to success in the evaluation process is to allay the anxieties of the student about the consequences and implications of his evaluation. (This would include giving him specific information about his expected performance and about the final repository of the evaluation report.) Recommendations are developed for how to avoid or diminish the intrusion of personal irrational factors and conflicts, and how institutional policy should create optimum conditions for effective evaluation programs.

434.

Korman, Maurice, and Stubblefield, Robert L. "Medical School Evaluation and Internship Performance." Journal of Medical Education, 46 (August, 1971), 670-73.

These authors cite a study at the Texas Southwestern Medical

School which indicated the possible predictive value of peer evaluation. Sixty-eight graduating students were rated at the completion of their internship, using a modified Cowles and Kubany instrument. These ratings of their clinical performance as interns were examined to see whether they correlated with (1) grade point averages in medical school and/or specific clinical course grades; (2) ratings of "physicianship" by clinical and preclinical faculty; and (3) peer ratings. The best predictors of internship performance were the peer ratings (completed by the entire class for each student). Grades showed a consistent lack of correlation, although clinical faculty ratings in the surgery department produced slightly higher correlations. The highest correlations for peer ratings, though significant, were only in the .30 to .40 range. The authors thus acknowledge that their predictive meaningfulness is limited.

435.

Kubany, Albert J. "Use of Sociometric Peer Nominations in Medical Education Research." Journal of Applied Psychology, 41 (December, 1957), 389-94.

Kubany explores the usefulness of peer nomination in medical education, which he feels can produce useful criteria for measuring student performance where personal qualities are involved. It is the author's belief that students' evaluations of each other warrant the attention of educators because students have more time than their instructors for observing their fellow students, and that their informal social contacts permit them to observe each other more candidly and honestly. The system outlined in this article consisted of asking each member of a senior medical class to nominate the three students he felt were the most effective individuals in each of eleven areas. There were eleven variables in a list of rating criteria, ranging from "Medical Facts" to "Friend and Associate." The author reports the findings in detail. Among them are the fact that correlation between peer nomination and instructor evaluation on comparable measures was +.44, significant at the .01 level. Correlations between peer nomination and grades were all positive and usually significantly different from zero.

436.

Lamont, Campbell T., and Hennen, Brian K. E. "The Use of Simulated Patients in a Certification Exam in Family Medicine." Journal of Medical Education, 47 (October, 1972), 789-95.

This article discusses some of the advantages and disadvantages of using simulated patients and describes their use as part of the certifying exam of the College of Family Physicians of Canaada. Actors were programmed to portray patients presenting problems commonly encountered in family medicine, and the candidates conducted interviews with the "patients" while being observed and rated by examiners through a one-way window. The candidates were rated from 0-12 for factual recall, observation and interpretation, problem solving, attitudinal skills, and overall competence. Points were also awarded for specific behaviors: for example, three points might be awarded for reassuring a patient. The simulated patients were asked to assess each candidate's attitude, approach, and manner, using an adjective checklist, and were asked whether they would want him as a family physician. Candidates were asked their reactions to the exam. It was concluded that the simulation was valid in the context in which family physicians interact with patients, and that this was an effective method of assessing a doctor's personal skills in interacting with patients. Examiners and candidates were favorably impressed with the "reality" of the situation.

437.

Langsley, Donald G., and Aycrigg , John B. "Filmed Interviews for Testing Clinical Skills." Journal of Medical Education, 45 (January, 1970), 52-58.

Six-minute excerpts from filmed interviews with patients were used to test first-, second-, and fourth-year medical students, residents, and faculty. It was found that each group scored higher than all of those at a lower level, faculty scoring highest. Each group was also found to be distinguishable from the others at the .05 level or better by a "t" test. It was therefore concluded that these tests measure a clinical skill which increases with time spent in medical school and with residency training. The tests asked students to rate patients on a number of seven-point scales. Correct or criterion ratings were derived from a faculty group.

438.

Levine, Harold G., and McGuire, Christine H. "The Use of Role-Playing to Evaluate Affective Skills in Medicine." Journal of Medical Education, 45 (September, 1970), 700-05.

This article describes role-playing tests (referred to as simulation orals) which were developed as part of the Orthopaedic Certifying Exam to measure ability to relate to patients and colleagues. Each test consists of 30 minutes of oral simulations, where two trained examiners alternate in taking the role of a specified patient, colleague, or allied health professional in a set of standardized encounters. The examinee must play the role of the physician in situations such as reassuring an anxious patient, gaining the patient's cooperation in a proposed treatment plan, discussing an unfavorable prognosis or an unforeseen bad result with a patient, instructing a nurse, dealing with a complex legal situation, confronting a colleague with whom one disagrees, etc. The examiner who is not engaged in role-playing completes a rating form (which the article does not describe). Reliability for these tests was felt to be adequate, with content validity acceptable, construct validity probable, and concurrent validity ambiguous.

439.

Levit, Edithe J. "The Use of Motion Pictures in Testing the Clinical Competence of Physicians." Annals of the New York Academy of Sciences, 142 (March 31, 1967), 449-54.

This is a good description of the National Board of Medical Examiners testing films. Levit details the method of film production, covering patient selection and film planning, the actual filming itself, the creation of questions and initial editing, the use of an expert panel to review and revise questions, final editing and printing, and test administration.

440.

Linn, Bernard S., and Zeppa, Robert. "Measuring Performance in the Surgical Clerkship." Journal of Medical Education, 49 (June, 1974), 601-04.

The authors describe their study of a comprehensive evaluation procedure employed for measuring a surgical clerkship. At the completion of the clerkship information was solicited from the students about their attitudes toward both the teaching and the program. Along with this evaluation, several other factors were weighed: NBME scores, student's rank in his class, faculty and staff evaluation of the student, and the student's final grade in surgery. Forty-three variables were intercorrelated and factor-analyzed.

The primary finding was that certain attitudes related to behavior and (to a lesser extent) to grades and NBME scores, and that behaviors formed a separate dimension of competence from NBME scores and grades. Students who had indicated that they needed more study time were better performers.

441.

Liske, Ralph E.; Ort, Robert S.; and Ford, Amasa B. "Clinical Performance and Related Traits of Medical Students and Faculty Physicians." Journal of Medical Education, 39 (January, 1964), 69-80.

This is a review of an evaluation study of the clinical performance of students and physicians by ratings (based on global opinions) solicited from their peers, superiors, and subordinates, from which the authors sought to establish relationships between the ratings obtained and individual traits of personality and biographical data. The evidence collected for this study supported the following hypotheses: (1) Low performance ratings are associated with the tendency to see doctor-patient relationships in terms of attributes and limitations of the patient. (In the case of students, low performers are likely to have professional fathers and to view others impersonally, while they tend to seek recognition and attention for themselves.) (2) High performance ratings are associated with the tendency to define doctor-patient problems in terms of doctors' own limitations. (Students in this group are likely to have non-professional fathers and to be humanitarian and responsible in their relationships with others.)

442.

Margolis, Carmi Z.; Sheehan, T. Joseph; and Stickley, William T. "A Graded Problem-Oriented Record to Evaluate Clinical Performance." Pediatrics, 51 (June, 1973), 980-85.

This article is an investigation of the use of problem-oriented medical records in the evaluation of medical students. The problem-oriented record was divided into 14 sections, each of which was graded for structure and completeness, with a maximum possible score of 162 points. When eight teachers graded a single workup, the coefficient of variation was only 2.8 per cent. In two observed workups, observed and recorded data correlated highly. Three clerkship groups handed in a total of 66 problem-oriented records with a mean score of 101.75 points. It was concluded that the graded problem-oriented record could objectively measure facility at data collection, data recording, and problem solving, and that students were taught these skills by grading a workup themselves.

443.

Marshall, V. R., and Ludbrook, J. "The Relative Importance of Patient and Examiner Variability in a Test of Clinical Skills." British Journal of Medical Education, 6 (September 1972), 212-17.

This is a report on an experimental effort to reduce inter-examiner variance by controlling inter-patient variance. Four pairs of examiners each examined students in a control situation and in an experimental situation. The authors were unable to show that controlling inter-patient variability reduced inter-examiner variance in their study. Variance was, in fact, marginally increased. These authors met with failure in an earlier attempt to reduce inter-examiner variance, and their conclusion now is that it can't be done, that judgments of clinical skills in a conventional test setting are purely personal. They contend that we should not labor under the illusion that we are measuring anything in clinical performance evaluation--that we are only judging whether a student is fit to join the club (of registered practitioners). The authors describe the methodology they employed in their study, as well as a number of collateral findings, the most important of which is that the correlation between grades awarded by individuals was significantly higher when they worked in pairs than when they worked separately. Also grades awarded to students examined early in the day are lower than those examined later in the day.

444.

Mays, Mary Jo. "Reliability of a Method of Evaluating the Clinical Performance of a Physical Therapy Student." Physical Therapy, 53 (December, 1973), 1298-306.

This article is the report of a study which developed a shorter and more reliable form for evaluating the clinical performance of physical therapy students by having clinical teachers rank the objectives and their criteria, which appeared on a longer form, in order of their importance. Agreement among raters in ranking objectives was significant at the .001 level. The grades which students had received on the four highest-ranked objectives were found to correlate highly with each student's overall grade. For this reason a shorter evaluation form was developed, using only the four top-ranked objectives. These were (1) application of basic knowledge to physical therapy procedures, (2) application and teaching of physical therapy procedures, (3) needs of patient, and (4) observation. Items not included were relatively unimportant, inconsistent, or unstable. The author suggests that clinical evaluation forms should omit the evaluation of less important material, concentrating on skill and knowledge. A copy of the improved form is included.

445.

Menges, Robert J. "Assessing Readiness for Professional Practice." Review of Educational Research, 45 (Spring, 1975), 173-207.

The assessment of individuals to determine their readiness to practice a helping profession (assessment for purposes of certification or registration) is the primary focus of this article, which reviews a great quantity and variety of literature on the topic. Four types of evidence which may be utilized in determining readiness are discussed: (1) personality characteristics;

(2) knowledge of subject matter; (3) application of subject matter; and (4) actual or simulated performance on the job. The author makes the following generalizations on the basis of his review of the literature: (1) Definitions of effective practice should emphasize many discrete behaviors and characteristics rather than global definitions. (2) Measures of these characteristics should be as similar to the criterion itself as possible. (3) Multiple assessment devices should be used so that no single type is overused. Measures of subject matter knowledge should be less heavily weighted. (4) Data should not be used for decision-making until longitudinal studies demonstrate adequate predictive validity.

The author also feels that professional readiness should not be assessed in a competitive context where the examinee may feel the examiner is his adversary.

446.

Miller, George E. "Evaluation of Medical Education: A New Look." Journal of Medical Education, 39 (March, 1964), 289-97.

Miller argues in this article in favor of criterion-referenced evaluation based on behavioral objectives, and stresses the need to identify the student's strengths and weaknesses. He feels that helping the student determine how much he has learned and how much he has yet to learn is more important than certifying that he has learned enough. To help the student identify his needs requires setting clear, measurable educational objectives on which to base evaluation, and then maintaining absolute standards of performance for testing. He recommends frequent assessments of performance for the student's guidance and infrequent assessments for determining whether the student is meeting minimal requirements. Miller favors item analysis of written exams in order to see what specific information most students failed to gain from their instruction. However, he deplores the tendency to assume that student success points to excellence of instruction and student failure points to student shortcomings.

447.

Oaks, Wilbur W.; Scheinok, Perry A.; and Husted, Frank L. "Objective Evaluation of a Method of Assessing Student Performance in a Clinical Clerkship." Journal of Medical Education, 44 (March, 1969), 207-13.

The method of assessing student performance under examination and statistical analysis in this article was in use at Hahnemann Medical College, Philadelphia, at the time these authors were writing. The school was employing a rating scale instrument which comprises eleven different student attributes on which to rate clinical performance. However, this objective rating scale score is used only as a guideline in arriving at a student's final grade. The student receives a final grade in the form of [illegible] subjectively determined number grade between 65 and 100, which is his preceptor's "impression of the student's overall ability," shifting the final assessment from a judgment of performance to an evaluation of ability. In order to evaluate their grading system the authors compared the subjective final grade to the more objective rating scale scores for each student. One hundred eight (108) out of 253 grades were found to be a mismatch, i.e. the rating scale score did not fall within a three per cent range of the final grade. Other statistical findings are included.

448.

Palmer, Mary Ellen. Self-Evaluation of Nursing Performance Based on Clinical Practice Objectives. Boston, Mass.: Boston University Press, 1962, 173 pp.

The primary aim of this study was to determine the degree of accuracy with which students could use a rating device for evaluating clinical performance (which the author had previously developed and shown to be valid and reliable) to establish their own clinical practice grades. A corollary aim was the identification and assessment of other factors involved in the self-evaluative process. This venture in self-evaluation produced results very satisfactory to the author, who concludes that students can evaluate themselves accurately, and sees many benefits accruing therefrom to all concerned in the educational process. The most beneficial aspect of the whole experience seems to have been having the students write anecdotes on various aspects of their clinical performance. These anecdotes consisted of reactions to carrying out various nursing measures, evaluative comments on the performance of procedures, reflective thoughts on interactions with patients, analysis of problems, and statements of personal feeling.

449.

Printen, Kenneth J.; Chappel, Walt; and Whitney, Douglas R. "Clinical Performance Evaluation of Junior Medical Students." Journal of Medical Education, 48 (April, 1973), 343-48.

The authors describe a procedurally comprehensive system for evaluating surgery clerkship performance. The methods used were oral exams (counting ten per cent), multiple choice exams (25 per cent), test of psychomotor skills (15 per cent), and clinical performance evaluation (on which student is rated on a scale from 1 to 5, by at least three raters, on ten variables—counting 50 per cent.) An inter-rater reliability coefficient is computer calculated from rater scores for each student; when this coefficient is below 0.75

the clerkship director investigates the reason. (It was found that residents tend to give higher ratings than faculty give.) This system offers the objectivity provided by the use of three raters, an assessment of the realization of cognitive and psychomotor objectives, and a detailed profile. One drawback to its use was found in the reluctance of the raters to use the full breadth of the 1 to 5 rating scale.

450.

Quarrick, Eugene A., and Sloop, E. Wayne. "A Method for Identifying the Criteria of a Good Performance in a Medical Clerkship Program." Journal of Medical Education, 47 (March, 1972), 188-97.

This article describes an analysis of student evaluation data from six clerkship departments undertaken in an effort to identify the criteria of a good clinical performance. Five top criterion categories emerged in the listings from the six clerkships: (1) degree of involvement, (2) medical knowledge and skills, (3) human relations skills, (4) student role, and (5) personal traits. The criteria were ranked differently by the different departments, with the most striking disagreement among them as follows: two departments ranked human relations skills as among the most important criteria, while three other departments ranked human relations skills at the bottom of the list. The results of the study raise the natural question: what effect do these changes in criteria have upon the learning performance of the medical student?

451.

Rines, Alice R. Evaluating Student Progress in Learning the Practice of Nursing. New York: Published for the Department of Nursing Education by the Bureau of Publications, Teachers College, Columbia University, 1963, 76 pp.

This short book is a very general discussion of the evaluation of clinical performance in nursing, based on the conclusions found in the literature and on interviews with nursing instructors at several different colleges throughout the country. These interviews were carried out during the Co-operative Research Project in Junior and Community College Education for Nursing, 1952-1957. Hence the book is rather dated, although it was regarded as quite good in its time. It lists and discusses briefly the principles and purposes of evaluation and suggests the use of anecdotal records, checklists, rating scales (which were infrequently used by the instructors interviewed, who regarded them as having grave limitations), student self-reports, and patient evaluations. There is a brief chapter on learning theory which touches on learning readiness and transfer of learning. The author offers proposals for a program of evaluation, discussing what, how, when, and how often to evaluate.

452.

Salzman, Leonard F., and Romano, John. "Grading Clinical Performance in Psychiatry." Journal of Medical Education, 38 (September, 1963), 746-51.

This article describes an evaluation method which utilized a 9-point rating scale ranging from "failed" to "outstanding" to describe the clinical performance of psychiatry students. Ten separate categories were provided on which to rate the students. They covered all areas in which the clinical behavior of the students could be assessed, including measurable aspects of students' relationships in the clinical setting. The method described is considered to be superior to a more subjective method of evaluation.

453.

Schumacher, C. F. "A Factor Analytic Study of Various Criteria of Medical Student Accomplishment." Journal of Medical Education, 39 (February, 1964), Special Issue, 192-95.

The study described in this article utilized data collected from the evaluation of 306 medical school graduates from four different schools. Eleven criteria for measuring student accomplishment were subjected to factor analysis. The various criteria included the students' grades at the end of each of the first three years of medical school, scores on each of the several sections of NBME tests, and peer ratings of three characteristics: functional medical knowledge, diagnostic skill, and effective patient relationships. The findings suggest that a majority of these measures of student evaluation measure a single, general, complex dimension labeled general medical knowledge, which is reflected in grades, exam results and peer ratings. The principal components analysis revealed only two orthogonal factors: general medical knowledge and skill in patient relationships, the first of which accounted for 44 per cent of variance and 83 per cent of correlation in the original matrix.

454.

Schwab, Edward, Jr., and Schwab, Reiko. "Evaluation." AHIP News, 2, October, 1973. Center for Allied Health Instructional Personnel, University of Florida, Gainesville, 4 pp.

This article focuses attention on performance evaluation in allied health programs, where evaluation provides information about the students' mastery of performance, not for grading purposes, but rather for diagnosis of the learning process. The authors make clear in what ways such diagnostic tests differ from tests of knowledge (administered as tests of certification). They offer a list of explicit suggestions to aid in selection of tasks with which to construct a diagnostic test of performance.

455.

Scott, Hugh M., and Sniderman, Allan. "Evaluation of Clinical Competence Through a Study of Patient Records." Journal of Medical Education, 48 (September, 1973), 832-39.

This is the report of a two-month evaluation study of the performance of a medical house staff team (consisting of three fourth-year medical students, two interns, one junior resident and one resident). Patient records (which had been modified to include recommendations of junior members of the team before consultation with their superiors) were analyzed by the chief resident and the attending physician. The performance of each team member was rated in several categories: (1) number of problems identified at the time of admission, (2) omissions in patient history and physical examination, (3) omissions in investigation and therapy, (4) problems not detected, (5) problems inadequately resolved, (6) new problems detected, (7) errors with potentially major harmful effect on patient welfare.

Comparing the scores of trainees on different levels indicated that capability increased with experience and training, but comparing the scores of trainees on the same level indicated highly individual capabilities, both strengths and weaknesses--and a need for individualized remedial education. Evaluating patient care when a resident had primary responsibility and evaluating when he had supervisory responsibility showed that care in the second instance was not necessarily as good as in the first. Very little team action was indicated. More effective clinical teachers seemed needed.

The authors conclude that the technique employed in this study could be used advantageously to find and correct errors in patient care, to detect deficiencies in clinicians' knowledge and performance, to aid in program assessment, and to help in setting standards in clinical experience and standards for competence of trainees for purposes of professional certification.

456.

Slaymaker, Jane Estner; Crocker, Linda M.; and Muthard, John E. Fieldwork Performance Report Manual: Use, History and Development. Rockville, Md.: The American Occupational Therapy Association, 1974, 34 pp. plus unpaginated appendices.

This manual for users of the Fieldwork Performance Report Manual (the standardized rating form used for evaluating the performance of all occupational therapy students during clinical education) has three parts: (1) instructions to users, including a statement of purpose stressing the need for a uniform rating procedure (this section is unusually thorough); (2) a history of the development of one FWPR; and (3) validity and reliability of the FWPR. A copy of the FWPR itself (the observational rating scale) is included as an appendix, as are a rater's guide, a scorer's guide, and a response sheet.

457.

Strassman, Harvey D.; Neis, Alexander; and McDonald, Evelyn. "An Attitudinal Objective: Its Measurement Through the Use of Taxonomy, II." Journal of Medical Education, 42 (March, 1967), Special Issue, 201-06.

The authors cite a study of eleven medical students engaged in a clinical clerkship in which there was an effort made to assess attitudes displayed by the students toward their patients, and to evaluate the success of teaching attitudinal objectives. The instrument devised for the evaluation rated various behavioral actions on a taxonomic scale which the authors felt reflected adequately the accomplishment of attitudinal objectives by students.

458.

Turner, Edward V.; Helper, Malcolm M.; Kriska, S. D.; Singer, Stanford A.; and Ruma, Steven J. "Evaluating Clinical Skills of Students in Pediatrics." Journal of Medical Education, 47 (December, 1972), 959-65.

The purpose of this well-designed study was to examine the factors which influence inter-rater reliability in performance evaluation. The authors report on the evaluation ratings of 50 student-patient visits by third-year students in pediatrics. The visits were recorded by videotape. The plan was an effort to obtain reliable ratings in three skill areas: communication, interpersonal relationships, physical examination. Ratings of each tape were performed by four rater-physicians. It was found that the degree of agreement among raters depended upon both the nature of the rating process and the exact arithmetic operations used to translate tally marks into an overall score. Findings also indicated that the variables rated can be assessed better through tabulation of specific acts than through global judgments. The authors concluded (1) that evaluation of clinical performance must be approached with care (the ratings showed that interpersonal behavior was a more important factor to a good physical examination than communication skills--an unexpected finding), and (2) that "opinions of capability not based on observed specific actions impartially judged probably will not be reliable."

459.

Vigliano, Aldo, and Gaitonde, Margesh. "Evaluation of Student Performance in Clinical Psychiatry Clerkship." Journal of Medical Education, 40 (February, 1965), Special Issue, 205-13.

Instead of outlining or proposing a design for student evaluation, these authors report on a systematic study of a set of written narrative statements of evaluation from a system already in use in a program to rate medical students in psychiatry. The purpose was to determine from a study of these statements exactly what implied criteria of evaluation the faculty was using to fashion these narrative descriptions of students. The statements were first distilled to a list of 50, which fell into seven criterion-categories. Then the faculty members individually rated each of these 50 items on a scale of one to four to indicate their judgment of how much weight each item carried as a criterion of student performance. Thus it was possible to make a listing of the important criteria of evaluation which the faculty was using. The authors point out that some criteria might be discarded and others revalued after such an evaluation. The study might also be beneficial to aid faculty in clarification or modification of educational objectives.

460.

Wandelt, Mabel A., and Stewart, Doris Slater. Slater Nursing Competencies Rating Scale. New York: Appleton-Century-Crofts, 1975, 101 pp.

This book describes the Slater Nursing Competencies Rating Scale, amplifying upon previously published information about the scale. The scale "not only provides means for accounting for the quality of a nursing staff's performance and for identifying areas of strengths and weaknesses, but also provides descriptions of the strengths and weaknesses which serve directly for planning ways to strengthen and improve the quality of nurse performance. The scale repeatedly has been demonstrated to be sensitive enough to measure changes that occur (learning) in as brief a time as two weeks." Pointing out that measurement is objective, and that evaluation is a subjective judgment based on many measurements, the authors stress that nurses should not question the validity of their evaluation merely because it is based on subjective judgment. On the contrary, they maintain, since clinical instruction, guidance, and supervision are primarily geared to assisting nurses to make judgments, and clinical instructors are constantly using their clinical judgment in supervising their students' judgments, clinical instructors have no need to doubt their competence in using their judgment to evaluate the results of their instruction.

461.

Wilhelm, Irma J. "Q-Methodology in Rating the Clinical Competency of Physical Therapy Students: A Model." Physical Therapy, 49 (November, 1969), 1227-30.

The author suggests an adaptation of the Q-methodology technique for general use as an evaluation tool in measuring clinical performance of physical therapy students. She describes and offers a model, a block design of two dimensions, designed to identify operational fields or functional domains, and levels of competency in which the student can be rated.

462.

Wood, Vivian. "Evaluation of Student Nurse Clinical Performance: A Problem that Won't Go Away." International Nursing Review, 19 (No. 4, 1972), 336-43.

This article opens with a general discussion of the fact that problems do exist in clinical measurement, testing, and evaluation of student nurses. It includes a review of the literature on improving clinical evaluation of student nurses. Six major studies are briefly summarized. The author leans toward adoption of rating scales based on clinical objectives. She discusses one of her own studies, which indicated that differences frequently exist between written reports and verbal evaluations of the performance of a particular student (implying that supervisors are more reluctant to be negative on a written report).

463.

Zacharias, A.; Fisher, L. A.; and Duggan, H. E. "Resident Evaluation . . . Is Your Method Effective?" Journal of the Canadian Association of Radiologists, 24 (March, 1973), 12-17.

This article discusses the importance of evaluating residents in radiology and describes the objectives, evaluation procedures, and evaluation instruments used in the Diagnostic Radiology residency program at Foothills Hospital and the University of Calgary in Alberta, Canada. The focus of the evaluation program is on helping the resident to determine his own degree of competence, to recognize his assets and his liabilities, and to develop programs of future action to capitalize on the assets and minimize the effects of the liabilities. Both a rating scale based on objectives and a form for recording critical incidents are used to evaluate the residents.

FOR OTHER ENTRIES related to student evaluation see also:

78, 330, 484, 505.

464.

Becker, Howard Saul; Geer, Blanche; and Hughes, Everett C. Making the Grade: The Academic Side of College Life. New York: John Wiley and Sons, 1968, 150 pp.

This highly readable book by the authors of Boys in White is the first volume of a report of a study of the sociological aspects of college life. The study utilized the method of participant observation. Many quotes from college students themselves about the importance of grades in college are included. The authors conclude that the pressures of grade-point average requirements have a negative effect on the student and on the student's ability to pursue his own interests and develop into the sort of scholar that the university purports to produce. They favor the total abolition of grades for record-keeping purposes. Pass-fail grading they consider a useful half-measure. They see no necessity for the university to distinguish among its graduates for the sake of consumers (i.e. graduate schools and businesses).

465.

Bender, Robert M. "Attitudes Toward Grading Systems Used in Medical Education." Journal of Medical Education, 44 (November, 1969), 1076-81.

This article opens with a discussion of pass/fail grades and letter or numerical grades, and evaluates these systems in terms of the functions of grading, which are administration, information for the student, guidance, and motivation. The author concludes that the guidance and information functions of grading are limited when a single symbol is used as a grade, that the administrative use of grades overemphasizes non-significant differences in numerical averages, and that the motivational function of grading is harmful because it does not encourage the student-physician to be self-directed. The author consequently favors the simplest possible means of certifying satisfactory completion of a body of subject matter, e.g., pass/fail.

The author then proceeds to report the results of a survey of all AAMC medical schools to obtain the attitudes of the deans and of selected students towards grading systems. This survey revealed de-emphasis of grades per se, and stimulation of self-motivation and interest to be an important current consideration. Grade emphasis was felt to be less at schools using a pass/fail system, and the majority of faculty and students favored such a system.

466.

Chambers, David W. "Criterion-Based Grading." Technical Reports on Evaluation, No. 6. San Francisco, Calif.: University of the Pacific School of Dentistry, 1971, 27 pp. (Mimeographed.)

The author states, "The defining characteristic of a good grading system is that the grades given can be used by a third party to make effective and accurate decisions about a student's future." Here he describes the shortcomings of two alternative methods (pass-fail and norm-based evaluation) and points out the superior features of the criterion-based system which distinguish it from the others: "the two fundamental educational innovations which provide the foundation for criterion-based grading are the statement of objectives in behavioral terms that are congruent with the image of an excellent practitioner and the tailoring of instruction to fit objectives rather than the tailoring of evaluation to fit the existing distribution of student abilities." Included are suggestions for reestablishing the criteria, and for utilizing a timetable of instruction and evaluation that would effect the greatest benefit.

467.

Chansky, Norman M. "Resolving the Grading Problem." The Educational Forum, 37, No. 2 (January, 1973), 189-94.

This article opens with a brief review of some of the literature pertaining to the perceived inadequacy and harmfulness of the traditional grading system. The central content of the article is the author's contention that in evaluating college undergraduates the grading system should vary according to the purpose for which the course is offered and the motives of the student taking it. While he favors the retention of some modified version of multi-step grading (A-B-C-D-F) for undergraduates, the point is made that this type of grading becomes less valuable as the student draws closer to the foreseeable, planned end of his training.

468.

Hullinger, Ronald L.; Moon, Charles E.; and Render, Gary F. "Evaluation in Support of Learning." British Journal of Medical Education, 7 (September, 1973), 182-85.

These authors present a brief, well-written article on the destructiveness of norm-referenced evaluation, and propose changing to a pass/not pass system of rating using criterion-referenced instruments. They suggest that students must be moved from external to internal motivation if professional education is to effect its real purpose of teaching students how to learn. In their opinion failing grades should never be given. Instead, a student should receive a rating of "pass" if he has attained mastery of the skill in question, "inc" for incomplete if he has not. (A student who repeatedly failed to attain mastery would have to be counseled to leave the profession.) The point is made that a non-graded system facilitates self-evaluation.

469.

Layton, Janice. "Students Select Their Own Grades." Nursing Outlook, 20 (May, 1972), 237-39.

The author describes a grading system in which requirements for the letter grades A, B, and C are made known and students are allowed to work for whichever grade they choose. The advantages and disadvantages as seen by students and faculty are discussed. The system's main advantages are that it encourages goal-setting and self-direction, and by eliminating all ambiguity it decreases a student's anxiety about grades.

470.

Logan, Nelson S., and Taft, Thomas B. "Perspectives on Evaluation Techniques: Making the Grade." Journal of Dental Education, 37 (April, 1973), 10-13.

This article is a discussion of the dubious value of traditional grading and the desirability of moving to a system of criterion-referenced measurement. The author's orientation is humanistic and Rogerian. He briefly reviews some of the literature indicating that grades have little to do with adult accomplishment and indicates that he favors a flexible dental curriculum based on mastery learning.

471.

McGuigan, F. J. "Amount Learned: Am Empirical Basis for Grading Teachers and Students." Teaching of Psychology, 1 (October, 1974), 10-15.

This author feels that the primary criterion for evaluation of teachers and students should be the measure of the amount the student has learned. In this study of three psychology classes at Hollins College the author recounts how he used a "G" statistic as an index of the amount learned, developing a formula $G = (T_2 - T_1)/(r - T_1)$, where T_1 = the pretest score, T_2 = the posttest score and r = the possible score. He computed G-statistics and G-grades (based on degree of standard deviation of G-statistic from the class mean) for all students and found significant correlations between post-test gain, G-statistic, G-grade, and normal course grade values. The correlation between students' opinions of how much they learned and more objective criteria of amount learned was not significant. G-statistics for all three courses were high. Student opinionnaire results (student evaluation of courses) were also positive.

The author advocates basing a final course grade on some amalgam of the G-statistic and the terminal level performance determined by aptitude of the student.

472.

Armington, Catherine L.; Reinikka, Evodia A.; and Creighton, Helen. "Student Evaluation--Threat or Incentive?" *Nursing Outlook*, 20 (December, 1972), 789-92.

The authors offer both a brief discussion of whether or not students should be allowed to evaluate their teachers and a brief review of the literature relating to techniques of assessing teacher effectiveness. They conducted an evaluation of teacher effectiveness by mailing out questionnaires to 1,984 students in 20 nursing schools. The following profile of instructors with a rating of above the mean emerged: ". . . enthusiastic about their work, impressed students as being experts in their field, encouraged students to think, and were easily accessible to them."

473.

Barr, Arvil Sylvester, Project Director. *Wisconsin Studies of the Measurement and Prediction of Teacher Effectiveness: A Summary of Investigations*. Madison, Wis.: Dembar Publishing Co., 1961, 156 pp.

This volume summarizes more than 75 doctoral studies made at the University of Wisconsin and attempts to present a critical overview of these studies. The following questions are addressed: What were the methodology, criteria, statistical techniques, and assumptions of these studies, and what conclusions can be drawn from them? What are the personal and professional prerequisites to teacher effectiveness, and how can good teachers be distinguished from poor ones? What are the discrepancies between potential and performance, and what theories might give better results? For the most part, these studies are descriptive and exploratory rather than experimental. Many data-gathering devices were used in these studies and they are analyzed here.

In addition to the review provided by Barr, the book contains chapters by various authors which discuss the following topics with reference to these studies: the uses and abuses of correlation and regression techniques; factor analyses of the teaching complex; non-additive measures of effectiveness; abilities and patterns of behavior of good and poor teachers; motivation of teachers; and personal prerequisites to teaching effectiveness. A final chapter by Barr summarizes the major findings of this series of investigations.

474.

Caffrey, Bernard, and Kost, Glen E. "Student Evaluation of a Public Health Curriculum." American Journal of Public Health, 61 (May, 1971), 1022-29.

These authors report on a study that measured faculty performance in a public health curriculum. The study employed a modified Isaacson scale consisting of 20 items. A principal components factor analysis showed that responses to the items could be summarized using two independent dimensions: proficiency, or teaching ability (Factor I), which was found to be relatively independent of student-teacher interaction, or rapport (Factor II).

To assess validity it was hypothesized that Factor I would not be correlated significantly with class size, but that Factor II would be correlated. Both hypotheses were supported, and the authors conclude that the results show that an evaluation of teacher performance can be made independently of student-teacher interaction, or teacher "popularity."

475.

Centra, John A. "Self-Ratings of College Teachers: A Comparison with Student Ratings." Journal of Educational Measurement, 10 (Winter, 1973), 287-94.

In this study 343 faculty members from five colleges rated themselves and were rated by their students on a 21-item instructional report questionnaire. Comparison of the ratings showed a median correlation of .21, showing a general lack of agreement between self-evaluation and student evaluation. There was a tendency for the teachers as a group to give themselves better ratings than their students gave them. There was no finding that related the discrepancy to the sex or to the teaching experience of the teacher.

A comparison across items produced a rank correlation of .77, indicating a good deal of similarity in the way the two groups rank-ordered the items. This suggests that instructors are aware of many of their teaching strengths and weaknesses, despite the fact that they see themselves more favorably in absolute terms and may not compare themselves accurately with other instructors. It may be concluded that student evaluations can provide useful information for faculty members, and that self-rating can highlight for the individual what he might otherwise fail to realize about himself as a teacher.

476.

Centra, John A. Strategies for Improving College Teaching. Washington, D.C.: American Association for Higher Education, 1972, 51 pp.

This report discusses ways of improving college teaching. The author presents a general model of teaching and learning in a college course and briefly reviews some of the literature which has research implications for teaching and learning, providing a capsule of relevant findings and their implications for the improvement of teaching. The chapter entitled "Self-Analysis and Teaching Improvement" reviews literature on self-evaluation by teachers, addressing the question of whether teachers can see themselves realistically. It also considers the use of outside teams, faculty colleague observation, and audio-video feedback to aid self-analysis. The chapter on student ratings notes that students tend to be optimistic about the effects of their ratings and cites several studies of the effectiveness of student feedback, describing Centra's own five-college study in some detail. Institutional programs for teaching improvement (including faculty development programs and programs to prepare college teachers) are also discussed, as is technological impact on teaching improvement.

477.

Cohen, Arthur M., and Brawer, Florence B. Measuring Faculty Performance. Washington, D.C.: American Association of Junior Colleges, ERIC Clearinghouse for Junior College Information, 1969, 81 pp.

Cohen and Brawer propose that student gain toward specific learning objectives be recognized as the ultimate criterion in assessing the effects of teachers and teaching situations. They define teaching as "causing learning," and maintain that learning can be appraised objectively. The criterion for evaluation under this definition is demonstration of student learning which may be presumed to result from the efforts of the teacher in question.

This pamphlet is divided into two parts. Part I is a discussion of current practices in faculty evaluation and a report of research in the field. Chapter i reviews rating schemes in current use and discusses problems of rater bias, ambiguous purpose, and indefinite criteria. Chapter ii reviews attempts to relate teacher personality and teaching success. Chapter iii presents the inconclusive results of some studies of the relation between the personality of new teachers and their success on the job. Part II presents a critique of current practices of faculty appraisal and presents the authors' case for changing the purposes, methods, and criteria of faculty evaluation.

478.

Cotsonas, Nicholas J., and Kaiser, Henry F. "Student Evaluation of Clinical Teaching." Journal of Medical Education, 38 (September, 1963), 742-45.

The authors report on a study of an evaluation of medical school teachers by students and by faculty. In comparing the evaluations they concluded that (1) the degree of knowledge possessed by teachers is not an important variable to students in ranking their teachers on the basis of what they want from them--however, students are able to distinguish teachers' knowledgeability and do not make rankings influenced by the "halo effect"; (2) on the other hand, faculty members rank other faculty members almost exclusively on the criterion of knowledgeability, and they are much influenced by the "halo effect"; and (3) students in the clinical setting probably can recognize three factors in their teachers' performance: attitude toward patients and students, teaching techniques, and knowledge.

479.

Daugherty, Hope A. "Appraising College Teachers." Improving College and University Teaching, 16 (Summer, 1968), 203-06.

This article poses some fundamental questions about teacher evaluation (e.g., Which are the measurable objectives? Who should make the evaluation? How are the results to be used?) and reviews some of the problems involved in measuring quality of classroom instruction. The discussion is general. The author's purpose was not to explore scientific thinking about evaluation, but she does refer to some of the literature and presents a range of opinions on each question.

480.

Eble, Kenneth Eugene. The Recognition and Evaluation of Teaching. Salt Lake City, Utah: Project to Improve College Teaching, 1971, 111 pp.

This is a monograph on the recognition and evaluation of college and university classroom teaching. The author favors student evaluation of teaching and this is the major focus of the monograph. Arguments in support of student evaluation are presented, as well as more common criticisms. Evaluation instruments and programs are discussed. The impact of student evaluation and its implications for faculty review are considered. The monograph concludes with a series of appendices consisting of accounts of student evaluation systems at various universities.

481.

Gessner, Peter K. "Evaluation of Instruction." Science, 180 (May 11, 1973), 566-69.

This author reports on an evaluation study of a medical faculty's instruction of second-year medical students, and the correlation of the students' performance on the National Board Medical Exams in a given subject area (here a basic science) with their ratings of faculty instruction in that subject area. It was found that higher ratings of instruction correlated with higher class scores received on the NBME. However, no correlation was found between student ratings of instruction and class performance on departmental examinations given at the school level. The author suggests that both student ratings and class performance on national normative examinations are valid measures of teaching effectiveness.

Gessner presents a critique of a study by Rodin and Rodin (Science, 1972, pp. 1164-66) and takes the position that grades are not necessarily a more valid indication of teaching effectiveness than are student ratings just because the two are different.

482.

Goodenough, Eva E. "Forced Choice Technique as a Method for Discovering Effective Teacher Personality." Journal of Educational Research, 51 (September, 1957), 25-31.

This article reports on an effort to discover what teacher personality traits are associated with "effective discipline." School teachers were asked to rate two or three colleagues, one considered very effective in discipline and one very ineffective. Some were also asked to rate one teacher who fell somewhere between the two extremes. The rating instrument for this survey employed the forced-choice technique.

Goodenough's findings were that the items associated with effective discipline reflected personality traits of kindness, cooperation, sympathy, and tact, more than self-confidence, independence, frankness, or modesty. She feels that the forced-choice technique is a valuable method for isolating and determining the relative value of various traits to effectiveness of teacher personality.

483.

Gromisch, Donald; Bamford, Joseph C., Jr.; Rouse, Stephen N.;

Salls, Sanford; and Rubin, Samuel. "A Comparison of Student and Departmental Chairman Evaluations of Teaching Performances." Journal of Medical Education, 47 (April, 1972), 281-84.

A questionnaire designed for student evaluation was given to both students and departmental chairmen in a survey to rate the teaching performance of 24 medical school instructors. The authors report that none of the correlations between rankings based on student ratings and rankings based on chairman ratings was statistically significant. The validity of the ratings was not determined.

484.

Grush, Joseph E., and Costin, Frank. "The Student as Consumer of the Teaching Process." American Educational Research Journal, 12 (Winter, 1975), 55-56.

This study indicates that college students are objective consumers of the teaching process and that their judgment should be solicited to identify the teaching traits and classroom behaviors most instrumental for effective teaching. A series of evaluation processes were carried out which included students' evaluations of their own personalities as well as behaviors and personality traits of their teachers. The data elicited were measured and compared, with these results: (1) that students' own personality traits do not contaminate their evaluations of their teachers' skills, and (2) that students can discriminate between attraction to instructors as teachers and attraction to them as persons.

The authors present a full description and analysis of the methodology of their testing, all significant findings, and a complete portrait of what students consider to be the important characteristics of good teachers.

485.

Heath, Robert W., and Nielson, Mark A. "The Research Bases for Performance-Based Teacher Education." Review of Educational Research, 44 (Fall, 1974), 463-84.

Research and analysis of the literature on performance-based teacher education reviewed by these two authors led them to these principal conclusions:

(1) Review of the literature and analysis of research on the relation between teacher skills and student achievement fails to reveal a basis for performance-based teacher education (performance-based teacher education fails to prescribe teacher-training objectives).

(2) "Literature fails to provide such a basis . . . because of sterile operational definitions of both teaching and achievement, and because of fundamentally weak research designs" (p. 481).

(3) "Given the well-documented strong association betweeen student achievement and variables such as socioeconomic status and ethnic status, effects of teaching on achievement /as defined in the research analyzed/ are likely to be inherently trivial" (p. 481).

486.

Leftwich, William H., and Remmers, Hermann Henry. "A Comparison of Graphic and Forced-Choice Ratings of Teaching Performance at the College and University Level." Lafayette, Ind.: Purdue University, Division of Educational Reference, Studies in Higher Education, Vol. 92, 1962.

In this study 80 faculty members were rated by 2,109 students on two different rating devices, the Purdue Rating Scale for Instructors (a graphic rating scale) and the Purdue Instructor Performance Indicator (a forced-choice scale). Results from the two devices were compared and scores on the two instruments were found to be correlated to a substantial degree . The graphic scale was more susceptible to rater errors of leniency and halo, but the forced-choice scale was found to be "fake-able."

487.

Lewis, James, Jr. Appraising Teacher Performance. West Nyack, N.Y.: Parker Publishing Company, Inc., 1973, 227 pp.

This book describes an overall approach to performance evaluation and applies it to the evaluation of teachers. The author has taken the concept of management by objectives from the business world, where it has been used by managers to appraise employees, and shown how it can be applied to school system management and to the performance appraisal of administrators and teachers.

The "results"approach to evaluation advocated by the author rests on the assumption that the teacher does want to improve his or her performance and to do as good a job as possible. Change can thus be brought about by being as supportive as possible of the teacher in his or her efforts to change. Change will be motivated when the teacher is personally choosing the problems and goals to be tackled and feels help is available.

The book discusses: (1) how initially to implement this system of evaluation; (2) needs assessment and the setting of long-range goals by the school system; (3) how to write well-defined performance objectives; (4) the unique aspects of setting and achieving the four types of performance objectives (professional skill objectives, personal development objectives, problem-solving objectives, and innovative objectives); (5) appraisal counseling; and (6) the implications of motivation and perception for improving performance.

488.

McKeachie, Wilbert J. "Student Ratings of Faculty." AAUP (American Association of University Professors) Bulletin, 55 (Winter, 1969), 439-42.

This is a review of research on faculty evaluation by students. The goals outlined are fourfold: (1) to make comparison judgments of teaching effectiveness; (2) to help instructors improve their teaching; (3) to raise the level of the student's morale and increase his interest in his education; (4) to provide information for the student's use in choosing courses.

General recommendations for conducting the evaluation include using a form of scale rating which allows easy tabulation but includes some essay-type questions, encouraging wide participation and acceptance by faculty, keeping students' comments specific, and assuring anonymity to the student. The author summarizes, ". . . student ratings do have some validity. Teachers rated as effective by students tend to be those whose students learn most."

489.

Menges, Robert J. "The New Reporters: Students Rate Instruction." Evaluating Teaching and Learning. Edited by Robert C. Pace. New Directions in Higher Education, No. 4, Winter, 1973. San Francisco, Calif.: Jossey-Bass, pp. 59-75.

In a classroom the students and the teacher are the only firsthand observers of teaching activities. Therefore students can have valuable input into the evaluation process of their instruction. tion. This article stresses that student ratings are one source of information about teaching effectiveness, however; the faculty must weigh and interpret student ratings. Four general approaches to constructing format and selecting items for an evaluation form are discussed which the author breaks down into general categories: (1) developing a form based on intuition and consensus; (2) basing item selection on factor analysis; (3) choosing criterion groups as guides; (4) using instructor's goals as criteria. Specific rating forms are described and reviewed for content and format.

Analysis of the factors affecting reliability and validity of student evaluations shows no correlation between a student's rating and his year in school, grade point average, expected grade, age, number of previous courses in the field, sex, or marital status. The values of ratings--to students, faculty, and administration--can be significant if objectives, goals, and uses of the evaluation process are spelled out before the program begins.

490.

Miller, Martin T. "Instructor Attitudes Toward, and Their Use of, Student Ratings of Teachers." Journal of Educational Psychology, 62 (June, 1971), 235-39.

Miller presents a study designed to determine whether providing instructors with information from student ratings had effects on their subsequent ratings by students and on student achievement. For the study, which also tried to assess whether these effects were a function of instructor attitude toward student ratings, 36 instructors were divided into two groups, those who believed student evaluation could be a valuable source of suggestions for changing behavior and those who did not. Half of each group received feedback from student ratings and half did not. Analysis of covariance indicated that end-of-semester ratings did not differ significantly from earlier ratings according to whether or not the instructor received feedback from the ratings, nor did they differ significantly according to whether or not the instructor had a favorable attitude. In one course the mean final exam scores differed according to whether the instructor had feedback: exam scores were higher for those who had feedback, even though ratings stayed the same.

491.

Miller, Richard I. Developing Programs for Faculty Evaluation: A Sourcebook for Higher Education. San Francisco, Calif.: Jossey-Bass, 1974, 248 pp.

This book is notable for its 132-page selected annotated bibliography on faculty evaluation. In the main body of the book, Miller discusses strategies for developing a system of faculty evaluation, evaluation criteria, student evaluation of classroom teaching, and the evaluation of educational administrators. Various sample appraisal forms are included, including one for evaluating administrative effectiveness.

492.

Miller, Richard I. Evaluating Faculty Performance. San Francisco, Calif.: Jossey-Bass, 1972, 145 pp.

Some of the basic assumptions presented in this book are as follows: that accountability is a growing trend; that merit evaluation is desirable; that overall evaluation is inevitable; that evaluation should facilitate professional development; and that appraisal should provide feedback and guidance as well as judgment. Evaluations by students, self-evaluation, and classroom visitation are all recommended as inputs into the evaluation of teaching. There is recognition that a professor is more than just a teacher, and it is suggested that he be appraised in his capacity as an advisor, and that his faculty service and relations, his administrative effectiveness, and his professional status and activities be appraised as well. Evaluation forms are presented for appraising all these areas, and also for appraising publications and public service. There is a 44-page selected annotated bibliography on faculty evaluation, but it has been superseded for the most part by the annotated bibliography in Developing Programs for Faculty Evaluation (also by Miller).

493.

Naftulin, Donald H.; Ware, John E., Jr.; and Donnelly, Frank A. "The Doctor Fox Lecture: A Paradigm of Educational Seduction." Journal of Medical Education, 48 (July, 1973), 630-35.

This is the report of a managed experiment in teacher evaluation carried out in the following fashion: a lecturer supplied with impressive but spurious curriculum vitae was presented to a group of experienced medical educators acting as students in a new learning situation. The lecturer's presentation was completely irrelevant, conflicting, and meaningless in content. In evaluating the lecturer the educators rated him favorably at the significant level. The inference is that teacher evaluation is not necessarily related to teacher effectiveness; personal popularity may create a halo effect which distorts the process of evaluation.

494.

Noyes, Ward D., and Ettinger, Mark P. "Medical Student Evaluation of Teachers and Curriculum." Journal of Medical Education, 48 (January, 1973), 102-03.

These authors describe evaluation forms used at the University of Florida College of Medicine for rating of pre-clinical and clinical courses and faculty performance. Evaluations by students were considered useful in assessing teacher performance and planning changes in course content and organization.

495.

Rodin, Miriam, and Rodin, Burton. "Student Evaluations of Teachers." Science, 177 (September 29, 1972), 1164-66.

This is a report on a study which led the authors to make the claim that "Students rate most highly instructors from whom they learn least." Their bases for this conclusion derived from a study of 293 students and 11 instructors participating in a large undergraduate calculus course. Results of the study of student evaluation and class performance showed that the instructors rated most highly by students had the classes with the lowest mean grades (initial ability being held constant), and vice versa. The authors conjecture that possible explanations for the results could include the following: students may resent instructors who make them work too hard and learn more than they want to; as students learn more they may become more aware of the weaknesses of their instructors; evaluation of an instructor may be based on who he is rather than what he does. (Gessner, 1973, Science, pp. 566-69, provides a critique of the Rodin approach.)

The authors discuss at length the result of studies of student evaluation and class performance by Remmers (1928, 1930, 1949) and Elliot (1950), taking issue with the conclusion often drawn from their work that there is a positive relationship between the objective and the subjective criteria of teaching effectiveness.

496.

Rous, Stephen N.; Bamford, Joseph C., Jr.; Gromisch, Donald; Rubin, Samuel; and Sall, Sanford. "The Improvement of Faculty Teaching Through Evaluation: A Preliminary Report." Journal of Surgical Research, 11 (June, 1971), 311-15.

The authors present a New York Medical College plan for student evaluation of faculty teaching which was designed to improve the quality of instruction. The program encouraged faculty members to submit voluntarily to their students' evaluations and to subsequent counseling by a Medical School Committee on self-improvement in teaching. Twenty-seven teachers volunteered to have their students rate them on seven key aspects of teaching: (1) planning and organization, (2) communication, (3) cognitive teaching personality, (4) affective teaching personality, (5) motivation, (6) instructional techniques or methods, and (7) subject or content. It was felt that the evaluation could benefit the teaching program in two ways: first, the individual teacher could profit by using the knowledge gained about himself, and second, the teaching program could be better planned with the knowledge gained about the faculty's strengths and weaknesses. The results of this program were published in a later article which appeared in the Journal of Surgical Research, Vol. 13 (1972), pp. 262-66.

497.

Rous, Stephen N.; Bamford, Joseph C., Jr.; Gromisch, Donald; Rich, Herbert; Rubin, Sam; and Sall, Sanford. "The Improvement of Faculty Teaching Through Evaluation: A Follow-Up Report." Journal of Surgical Research, 13 (November, 1972), 262-66.

This article is the second part of a report by these authors which described a voluntary program of student evaluation of the teaching faculty at New York Medical College. The faculty members who participated received teaching profiles which graphically identified their strengths and weaknesses in five areas of teaching (an earlier, longer form was modified and shortened). None of the participants sought teaching counseling from the faculty group which had been organized to offer it. After periods of from one to three months 16 of the original 27 participants were evaluated a second time. Mean improvements for the group were statistically significant in all categories except "teaching approach."

498.

Rugg, Edwin A., and Norris, Raymond C. "Student Ratings of Individualized Faculty Supervision: Description and Evaluation." American Educational Research Journal, 12 (Winter, 1975), 41-53.

This article describes a factor-analytic study involving 125 graduate students in psychology who were asked to identify behavioral dimensions of faculty supervision in the students' individualized learning situations. The rating instrument (a questionnaire) had two facets: (1) *descriptive*, in which students estimated the frequency of occurrence of certain supervisory behaviors, and (2) *evaluative*, in which students rated their level of satisfaction with various aspects of the supervision and their experience. This was to permit examination of the predictive validity of the descriptive ratings with evaluative criterion variables. Ten dimensions of supervisory behavior emerged from an analysis of the descriptions of the supervisors, but none of these was a strong predictor of student ratings of the supervisor or of the experience. It was found that descriptive ratings of faculty behavior accounted for less than 30 per cent of the variance in experience evaluation scores, suggesting that a single emphasis on faculty evaluation neglects other important aspects of the educational situation which affect students' evaluation of learning experiences.

499.

Ryans, David G. "Notes on the Rating of Teacher Performance." *Journal of Educational Research*, 47 (May, 1954), 695-703.

The author says there are four chief reasons why teachers tend to object to teacher performance rating: (1) judges or raters may be prejudiced; (2) ratings are sometimes unreliable; (3) professional status of teachers should preclude rating of their performance; and (4) the teachers feel threatened. He does not agree with the validity of the latter two reasons, and feels that the first two can be overcome with better rating techniques. The two rating instruments he advocates are the "Forced-Choice Performance Report" and the "Classroom Observation Scale." A forced choice rating scale requires raters to choose a most descriptive and a least descriptive statement to describe a particular teacher behavior. The classroom observation scale possesses several unique and advantageous features, which can be outlined as follows: (1) Judgment of teacher behavior is based on immediate observation of teacher's performance and on inferences regarding teacher behavior derived from pupil behavior. (2) Many teacher traits or qualities constitute dimensions of behavior with opposite poles--these are described precisely by referring to specific behaviors. (3) A central tendency is avoided by forcing rating in direction of one pole or the other. (4) A detailed glossary is provided to describe teaching behaviors, and a thorough acquaintance with the rating device is demanded of the rater.

Correlation coefficients of .80 between ratings of different judges have been obtained with the Classroom Observation Scale. The author makes clear that, with any instrument, judgments must be based on actual teacher behaviors and that observation must be extensive in order to be representative.

500.

Slobin, Dan Y., and Nichols, David G. "Student Ratings of Teaching." Improving College and University Teaching, 17 (Autumn, 1969), 244-48.

The authors present a general discussion of frequently-heard objections to the use of student ratings of their teachers. They defend the principle of student evaluation of faculty, and refer the reader to the studies in the literature in support of its usefulness. The bibliography draws mostly from articles of the '30s, '40s, and '50s, with the most recent from 1967. Two different programs of student evaluation are described briefly.

The authors also touch on the extent to which ratings may be affected by variables irrelevant to teaching, e.g., class size, required versus elective course, and halo effect. They point out that student evaluation takes place whether the teacher likes it or not. The teacher's only choice is whether to inform himself in a formal way about the evaluation which the students have already done informally.

501.

Wolkon, George H.; Naftulin, Donald H.; Donnelly, Frank A.; and Johnson, C. Warner. "Student and Faculty Evaluation of Instructor as Measures of Teaching Effectiveness." Journal of Medical Education, 49 (August, 1974), 781-82.

The evaluation described involved medical school faculty and student ratings of the same basic sciences lecturer. When the evaluations by the two groups were compared, it was found that there was no statistically reliable similarity in mean ratings. The authors suggest that if student evaluations of faculty are to be used for the purpose of improving teacher effectiveness, then the teacher also should be provided an evaluation by other faculty. No relationship was found between student evaluation of faculty effectiveness and student achievement as measured by exam grades.

502.

Yarger, Sam J. "Competency-Based Teacher Preparation: Is There a State of the Art?" Kappa Delta Pi Record, 10 (December, 1973), 36-38.

The author raises his voice against the concept of measuring teacher effectiveness in terms of student behavior since the linkage between the two has not been clearly measured. He charges educators with ignoring "the historical, philosophical, sociological, and psychological foundations upon which any teacher preparation program must be built" and contends that in the future, teachers should be evaluated on the basis of their own behavior, rather than that of their students.

FOR OTHER ENTRIES *related to faculty evaluation see also:*

113, 134, 138, 441.

Evaluation of Program

503.

Abrahamson, Stephen. "Evaluation in Continuing Medical Education." Journal of the American Medical Association, 206 (October 14, 1968), 625-28.

The author stresses three goals of continuing education programs for physicians. He describes the effective program as one which enables the physician to (1) learn new information or reinforce the retention of old information, (2) learn new skills or upgrade old ones, and (3) develop favorable attitudes or refresh old ones. To determine the degree to which these objectives are met he suggests measuring (1) by the reactions of participants, (2) by achievement tests, and (3) by physician performance.

504.

American Medical Association, Council on Medical Education. Self-Analysis Outline for Allied Health Education Programs. Chicago, Ill.: American Medical Association, October, 1973, 24 pp. (Mimeographed.)

This pamphlet is provided for the use of administrators and educators in determining the needs and resources of allied health education programs as part of the accreditation process. Billed as "an in-depth evaluative instrument" to help those involved in the educational program review its quality, it is intended for use as a "standards" mechanism by which programs can be examined for strengths and limitations. The areas in which general standards are set forth and very briefly elaborated upon include curriculum design, administration, faculty, admissions, evaluation, resources and physical facilities, student services, student participation, and long-range planning.

505.

Angus, Edward L. "Evaluating Experiential Education." Implementing Field Experience Education. Edited by John Duley. New Directions for Higher Education, No. 6, Summer, 1974. San Francisco, Calif.: Jossey-Bass, pp. 77-84.

This article was written to offer guidelines for techniques of evaluating a program of experiential education. The author points out that the purpose of evaluation should be twofold:

(1) to evaluate individual student performance in the experiential learning program, and (2) to evaluate the total program. To assure effective evaluation the program itself must comprise these five specific components: (1) clearly defined objectives, (2) pre-field orientation, (3) an individualized learning contract and reading list, (4) an evaluation of student performances, and (5) effective means for evaluation of the program (specifically, survey instruments to collect data on which to base evaluation).

For evaluation of the individual student's experience a number of practices are set forth--standard reporting and evaluating devices, intermediate workshops, exit interviews, and self-evaluations.

506.

Dauria, Anne M. "Evaluating Continuing Education." Journal of Continuing Education in Nursing, 4 (July-August, 1973), 18-20.

Ms. Dauria describes the features of the continuing education program at the Virginia Commonwealth University School of Nursing which have contributed to its success. She suggests that the program can be evaluated by the way in which it meets the important objectives of effective continuing education: (1) meeting the perceived needs of the adult learners, (2) responding to increasing awareness of educational needs, (3) exposing the nurse-students to current theories and techniques, and (4) introducing the nurse to a resource person or persons who can be of assistance to him or her and to the employing agency.

507.

Deniston, O. L.; Rosenstock, I. M.; and Getting, V. A. "Evaluation of Program Effectiveness." Public Health Reports, 83 (April, 1968), 323-35.

This article offers a comprehensive, systematic approach to program evaluation which is aimed at improving the evaluation of program effectiveness of public health programs, but the evaluation model offered could be applied as well to other types. The basic approach presented is as follows.

Every program is characterized by program "objectives" which represent the desired end result of program activities. Each objective implies one or more necessary conditions ("sub-objectives") which must be accomplished in order to accomplish the program objective. "Activities" are performed to achieve each sub-objective. "Resources" are expended to support the performance of activities. Every program plan makes three assumptions: (1)

The expenditure of resources as planned will result in the performance of the planned activity. (2) Each activity properly performed will result in attainment of the sub-objective it is linked with. (3) Each sub-objective must necessarily be accomplished before the next one can be achieved, and if all sub-objectives are attained, the program objective will be attained. Program evaluation must determine the extent to which each of the three assumptions of every program plan is true.

The authors have based this model of program evaluation on a number of contributions in the literature, but they feel they are unique in their attempt to be comprehensive, uniform and consistent in their definitions and logic.

508.

Gurley, Laverne Tolley. "Criteria for the Evaluation of an Inservice Education Program." Radiologic Technology, 42 (March, 1971), 327-34.

This article offers general suggestions for the evaluation of inservice education programs for radiology personnel. The author's approach is that evaluation should ascertain both the adequacy and the effectiveness of the program. Adequacy is defined as the extent to which the objectives of the inservice training program meet the needs of the personnel involved and the needs of the department, the hospital, and the community. Effectiveness is the degree to which those objectives are achieved. Some specific objectives of inservice education programs for radiology personnel are listed, and suggestions are made for measuring the achievement of each.

509.

Haslam, Robert H.; Dempsey, John J.; and Freeman, Gloria M. "Evaluation of the Johns Hopkins Pediatric Housestaff Training Program by Past and Present House Officers." Johns Hopkins Medical Journal, 135 (October, 1974), 229-44.

This article discusses the merits of the Pediatric Housestaff Training Program at Johns Hopkins and presents the results of a survey of the Training Program's graduates. The authors feel that, although a survey of graduates from the Pediatrics Residency Program is obviously not sufficient alone as a mode of program evaluation, it is an essential component. In this article they include a discussion of the problems inherent in this type of survey research: bias in favor of alma mater; length of time which may have elapsed since association; change of concepts with time (in retrospect one might wish for more interaction with faculty, while at the time one wanted only to be independent); and the fact that program weaknesses are more aggravating at the time than they are years later.

510.

Hutchins, Edwin B., and Wolins, Leroy. Factor Analysis of Statements Describing Student Environment in American Medical Colleges. (Paper presented at meeting of Midwestern Psychological Association.) Office of Basic Research, Technical Report No. L631. Evanston, Ill.: Division of Education, Association of American Medical Colleges, 1963.

This paper describes an instrument developed by Hutchins to describe the learning environment in U.S. medical schools, called the Medical School Environment Inventory (MSEI). The MSEI contains 180 descriptive statements about medical schools, and the student rates each statement on a scale of 1 to 4 according to whether or not it is true of his school. The statements refer to the general environment of the school, including facilities, faculty, and student body. Some sample items are:

> "Many of the faculty seem bored with their teaching assignments."
>
> "The problem of comprehensive patient care is given little attention here by the students."
>
> "Faculty members here really push the students' capacities to their limits."
>
> "Many students here are content just to get by."
>
> "Personal hostilities are usually concealed or resolved as quickly as possible."
>
> "Students are concerned only with the work at hand and have few interests beyond this area."
>
> "The goals and purposes of the work are clearly defined for the student."

A factor analysis of the 180 statements revealed six factors: general esteem, academic interest and enthusiasm, extrinsic motivation for academic achievement, breadth of interest, intrinsic motivation for academic achievement, and clear, concise, encapsulated instruction ("spoonfeeding").

511.

Keairnes, Harold W. "Approaches to Program Evaluation."

Proceedings of the Regional Medical Programs National Conference and Workshop on Evaluation, 1970. Washington, D.C.: Department of Health, Education, and Welfare, Public Health Service, 1972, DHEW Publication No. (HSM) 71-7010, pp. 99-104.

The observations made here about program evaluation are very general, consisting of basic ground rules for conducting evaluation as a means of identifying activities in the program which show a need for change. Keairnes stresses that the evaluation should systematically describe past experience and achievement, but that the evaluators should avoid being judgmental. Their purpose is to provide information and observations useful to those who will make decisions for the future of the program.

512.

Keairnes, Harold W. "Behavioral Evaluation of a Continuing Education Program." Physical Therapy, 49 (October, 1969), 1099-1103.

This article describes the use of behavioral evaluation by telephone interview to evaluate the effect of a three-day workshop on PNF (proprioceptive neuromuscular facilitation) in Kansas. Interview questions are included. Data collected five weeks and five months after the course were the same: 78 percent of the participants were using PNF for their hemiplegic patients, while only 31 percent of a control group were. Before the course only 40 percent of the participants had used PNF for any kind of patient, while after the course 100 percent were using it. A follow-up evaluation after 12 months was planned.

513.

Keairnes, Harold W. "Program Evaluation Workshop--A Case Study." Proceedings of the Regional Medical Programs National Conference and Workshop on Evaluation, 1970. Washington, D.C.: Department of Health, Education, and Welfare, Public Health Service, 1972, DHEW Publication No. (HSM) 71-7010, pp. 104-07.

The workshop described by Keairnes provided a summary of the role of the evaluator in program evaluation and of the process of program evaluation. The distinction between program and project evaluation is noted, and the uses of evaluation are discussed. It is pointed out that evaluation used for justification must deal with established judgmental criteria; evaluation used for control must measure activities and their effects; evaluation used for learning or planning must provide continuous feedback, to improve quality of decisions affecting future programs.

514.

Khol, Timothy; Matefy, Robert; and Turner, John. "Evaluation of APA Internship Programs: A Survey of Clinical Psychology Interns." Journal of Clinical Psychology, 28 (October, 1972), 562-69.

This article describes a survey of interns at all APA approved facilities which was conducted in order to collect information about internship programs which could be useful to prospective interns in selecting their internships. The questionnaire which was used asked the interns for information about (1) the theoretical orientation, (2) the relative emphasis of training versus service, (3) the opportunity of interns to participate in decisions which affect them, (4) the existence of any rivalry or conflict among the staff, (5) the quality of diagnostic supervision, (6) the quality of therapy supervision, (7) the relationship between the departments of psychology and psychiatry, (8) the overall quality of the internship, (9) the hours per week spent in various activities, and a final question (10) "Would you accept the same internship again?".

515.

Moore, Margaret L. "Criteria for Evaluating a Clinical Educational Program in Physical Therapy." Hospitals, 40 (June, 1966), 82-85.

In this article Dr. Moore discusses the objectives and criteria on which the clinical education program in physical therapy should be evaluated, lists the criteria for selecting the site for a clinical education program, and reviews the benefits which accrue to a center which serves as an affiliation for clinical teaching. She stresses that a center functions for the purpose of teaching rather than supervising, and emphasizes the need for clinical staff who are effective instructors. She warns against overemphasis on grades, and urges rather that evaluation be a means to determine areas in the curriculum where weaknesses exist and to aid in subsequent modification of the program.

516.

National League for Nursing. Criteria for the Evaluation of Educational Programs in Practical Nursing. New York: National League for Nursing, Department of Practical Nursing Programs, 1971, 17 pp. (NLN pub. no. 38-1178.)

This pamphlet is intended to serve as a tool for (1) self-evaluation of educational programs in practical nursing; (2) evaluation of programs for which National League for Nursing accreditation is sought; and (3) appraisal of plans for the development of new practical nursing programs. These criteria were formulated by practical nursing educators, after study of the level of achievement attainable by such programs; the statements reflect acceptable standards, not ideals or maximum goals. Fairly specific guidelines are offered as interpretations of the criteria, which are quite general. The following areas are covered: philosophy and objectives, organization and administration, curriculum, faculty, students, facilities and resources, records, and evaluations.

517.

National League for Nursing. Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree, 3rd ed., rev. New York: National League for Nursing, Department of Associate Degree Programs, 1973, 11 pp. (NLN pub. no. 23-1258.)

This brief pamphlet is intended to serve as (1) information for the use of faculty and administration of associate degree programs in nursing, (2) a guide for faculty to use in self-evaluation and program review, and (3) an evaluation tool for the Board of Review to use in the accreditation process. The statements of criteria contained herein reflect acceptable standards formulated by people involved in associate degree programs; they are guides to action and yardsticks by which achievement can be measured. These very general criteria cover the following areas: (1) philosophy, purposes, and objectives; (2) organization and administration; (3) faculty; (4) students; (5) program of learning; and (6) resources, facilities, and services.

518.

Nelson, Charlene. "Evaluation of a Physical Therapy Curriculum: A Method." Physical Therapy, 51 (December, 1971), 1307-13.

This article describes a curriculum evaluation design utilized to evaluate the four-year baccalaureate program at the University of North Carolina at Chapel Hill. The method employed included surveys of physical therapy graduates, employers, and students, plus evaluation of admission information and a review of trends in physical therapy education and practice. Both questionnaires and interviews were used. The author was able to make several interesting points about this study. Among them are:

(1) Surveys of graduates provided the most valuable source of information. (Reducing the time delay between graduation and survey is recommended. This study included only graduates who had been employed for two or more years,

and included graduates since 1959.)

(2) Interviews with employers did not provide a valid evaluation.

(3) Student participation in curriculum evaluation is very beneficial and desirable.

519.

Shapiro, Alvin P.; Schuck, Robert F.; Schultz, Stanley G.; and Barnhill, Bruce N. "The Impact of Curricular Change on Performance on National Board Examinations." Journal of Medical Education, 49 (December, 1974), 1113-18.

The authors report that a decline in student performance on National Board Examinations was recorded at the University of Pittsburgh Medical School after a major curriculum change. However, performance recovered gradually, and the authors suggest that a longitudinal accumulation of data would be necessary to make any final evaluation of curriculum effectiveness. They also raise the basic question of the appropriateness of using National Board Examinations to evaluate curriculum and curriculum changes.

520.

Steele, Sara M. Contemporary Approaches to Program Evaluation and Their Implications for Evaluating Programs for Disadvantaged Adults. Syracuse, N.Y.: ERIC Clearinghouse on Adult Education, 1973, 250 pp.

Despite its title, very little of this book is specific to disadvantaged adults (although a lot of references are to the literature on adult learning). The book opens with a general discussion of contemporary ideas about program evaluation, and its intent is to serve as a useful reference work. It contains a table which lists problems and needs in evaluation and matches them up with the various program evaluation approaches which offer solutions or help in meeting those needs. These evaluation approaches are described in a summary fashion in Section III of the book, which in itself constitutes a form of annotated bibliography on program evaluation.

521.

Surveyor's Handbook of Information Concerning the On-Site Evaluation of an Educational Program for the Physical Therapist. American Physical Therapy Association, 1974.

"The purpose of this handbook is to assist APTA representatives conducting on-site evaluations to make maximum contributions to the evaluation process. The handbook contains basic items of information pertinent to the accreditation process as well as suggestions to help the on-site evaluation team members to understand their role in assessing the extent to which an educational program complies with the Essentials of an Acceptable School of Physical Therapy (1955)" (p. 1).

522.

Ware, Carolyn B. "Evaluation of Public Health Content in the Physical Therapy Curriculum." Physical Therapy, 46 (August, 1966), 847-55.

The purpose of this study was to assess the level of public health knowledge acquired by students in the physical therapy educational curriculum. Findings in a program at the University of North Carolina at Chapel Hill indicate that a content area such as public health can be integrated in a comprehensive manner and that significant gains can be made to prepare physical therapists who will demonstrate attitudes and abilities appropriate for graduates of basic professional education.

FOR OTHER ENTRIES related to program evaluation see also:

10, 494.

Costs And Financing

523.

Busby, Daniel D.; Leming, James C.; and Olson, Merlin I. "Unidentified Educational Costs in a University Teaching Hospital: An Initial Study." Journal of Medical Education, 47 (April, 1972), 243-53.

The authors present findings of a study at the University of Kansas Medical Center which was an effort to examine the program cost allocation (PCA) studies sponsored by the Association of American Medical Colleges at the Center for the fiscal year that ended June 30, 1969. The purpose was to identify and measure factors in major teaching hospitals that result in patient care costs which are higher than the patient care costs in non-teaching hospitals of comparable size. The study identifies additional costs allocated to educational programs, citing some of the major hypotheses as follows: ". . . in contrast to comparable non-teaching hospitals the University of Kansas Medical Center experiences a higher medically indigent patient load, operates outpatient clinics which are larger and more diverse, has a lower occupancy rate, has a greater utilization of diagnostic services, has a higher nursing staffing expense, provides a greater number of specialized medical services, and has a greater investment in clinical facilities and that each of these factors is related to or is influenced by educational programs. . . ." The article presents findings pertaining to the first five hypotheses; findings were inconclusive and are still under study for the last two.

524.

Carroll, Augustus J. Program Cost Estimating in a Teaching Hospital: A Pilot Study. Edited by Thomas J. Campbell and Mary H. Littlemeyer. Washington, D.C.: Association of American Medical Colleges, 1969, 149 pp.

This pilot study, notable in 1969 as an "original" in the field of program cost estimating in teaching hospitals, had two objectives: "(a) to describe a pilot study for developing criteria and procedures that hospitals can use to distinguish the costs of their patient care, educational, research, and community service programs, and (b) to present the criteria and procedures in a form that will provide guidelines for hospitals that want to do a similar program cost study of their own." The report offers concrete recommendations for establishing the criteria and procedures with which to compute "accurate and equitable" program costs in the various areas of the hospital.

525.

Fein, Rashi, and Weber, Gerald I. *Financing Medical Education.* New York: McGraw-Hill Book Co., 1971, 297 pp.

This book on financing medical education provides an analysis of alternative policies and mechanisms. It is often used as a basic source in this subject area and was cited in the report of a study, "Costs of Education in the Health Professions" (a U.S. Department of Health, Education, and Welfare publication).

526.

Hilles, William C. "Program Cost Allocation and the Validation of Faculty Activity Involvement." *Journal of Medical Education*, 48 (September, 1973), 805-13.

The author presents an historical review of the use of the effort measure technique in cost allocation studies and takes a look at the criticisms of effort reporting. He cites recent attempts by academic health centers to develop more acceptable and valid techniques to measure the education functions in medical education. Hilles offers an alternative methodology which he feels can better identify full program costs, one which makes a clear identification of the cost of *educating* medical students, not solely the cost of their instruction.

527.

Freymann, John G., and Springer, John K. "Education and the Hospital: Cost of Hospital-Based Education." *Hospitals*, 47 (March 1, 1973), pp. 65-67, passim.

The authors present a detailed review of a study recently completed at Hartford (Connecticut) Hospital, which demonstrated that if all education programs within the hospital were abolished, it would cost more to provide the same quality of essential hospital services. The study was undertaken in response to the increasing criticism that hospital-based education programs are inflating the costs of hospital care to the patient. The authors postulated that if a dollar value could be placed on the services performed by the enrollees in all the teaching programs, the residual cost of the programs themselves might appear more acceptable. From their investigation into the cost of maintaining hospitals without the presence of education programs, they arrived at certain conclusions which they feel justify including education in the operating budget of health care institutions. The article includes tables which illustrate how they made their cost analysis.

528.

Johnsen, Gordon N., and Eady, Carol M. "How Much Does Diploma Nursing Education Really Cost?" Nursing Outlook, 20 (October, 1972), 658-64.

This article involves a look at diploma nursing education and its costs from the point of view of a hospital administrator and a nursing director. Part I, the administrator's viewpoint, describes a study which was designed to take a close look at avoidable costs in several scattered hospitals in order to evaluate the financial operations of their diploma schools of nursing. Part II, the nursing director's view, describes the problem of increasing educational costs in relation to the need for directors of these educational programs to accept the responsibility not only for the quality of nursing education, but also for the economical use of a large sum of money.

529.

Koehler, John E., and Slighton, Robert L. "Activity Analysis and Cost Analysis in Medical Schools." Journal of Medical Education, 48 (June, 1973), 531-50.

The authors cite the impossibility of arriving at a true analysis of the cost of an ongoing program when that program involves overlapping activity costs of joint production. One can break down the total cost into "pure" and "joint" program costs, but other considerations must come into play, i.e. classical cost accounting procedures must be modified to allow the policy maker to ask of the program--is it "worth doing" or "paying for itself"? The policy question will help determine the appropriate procedure of assigning costs. This article is a detailed presentation of how to assign costs of simultaneous activities in order to obtain reliable cost estimates.

530.

MacGraw, R. M.; Hahn, J. J.; Autrey, H. L.; and Preissig, J. L. "Perspectives from New Schools--The Costs and Financing of Medical Education." New England Journal of Medicine, 289 (September 13, 1973), 558-62.

This article discusses the costs and financing of medical education through the perspective of new schools. This study was based on four new semiautonomous clinical or basic science medical schools developed by the University of Illinois over a three-year period from 1970 to 1972. These were developed within the academic framework of a single college of medicine, but under differing local conditions and in scattered geographic locations in the state. The experience in starting the new medical schools and of concurrently restructuring the University's long-established school in Chicago into a basic science and a clinical school "provided unusual opportunities for fiscal comparisons and analysis, and brought into focus the perspectives about the cost and financing of medical education that are reported here."

531.

Moran, Linda F. "Measurement of Partial Costs of Clinical Education." Unpublished master's thesis, Boston University, 1974.

The major focus of this study of the cost of clinical education is the method of measurement devised by the investigator. The author chose one aspect of the cost of clinical education, the factor of time, and analyzed the time that physical therapy clinical supervisors spend in student training activities compared with the time that students contribute in patient care activities. In her thesis the author gives background for the positive and negative aspects of affiliation for both the students and the affiliating institution, describes various methods of determining and allocating costs (citing several previous studies of cost analysis), discusses time and motion study methods, and concludes with a full description of the time study method which is examined in this paper. The study encompassed two pilot investigations, with a third under consideration. Moran presents data and conclusions based on the two completed studies.

532.

Patton, Frances L. "Physical Therapy Education--Who Pays?--Patient--School--Student?" Department of Hospitals, University of Southern California Medical Center. August, 1973, 2 pp. (Mimeographed.)

The author reports on a survey of physical therapy school directors to ascertain the costs of physical therapy education for the year 1973. Questions submitted to the directors, requesting costs for students and costs for schools, are provided. This mimeograph presents a compilation of the results. Also reported is a study of 30 University of Southern California students in their first month of affiliation, to determine the range of income produced by them through patient treatments, either based on actual average cost per treatment or using a figure of $8.00.

The average was $1,179.00 with a range of $600.00--$3,120.00.

533.

National Academy of Sciences, Institute of Medicine. Costs of Education in the Health Professions: Report of a Study, Parts I and II. Washington, D.C.: National Academy of Sciences, 1974 284 pp.

This is a comprehensive report of the information requested by Congress in a series of legislative charges set forth in Section 205 of the Comprehensive Health Manpower Act of 1971 (Public Law 92-157) on the costs of education in the health professions (particularly, medicine, osteopathy, dentistry, optometry, pharmacy, podiatry, veterinary medicine, and nursing). The charge requested estimates of average costs of education per student per year in the various health professions, and also recommendations for using the estimates to establish rates for capitation payments.

534.

Sprague, Charles C. "Analysis of Program Costs of Academic Health Centers." Journal of Medical Education, 48 (September, 1973), 793-94.

The author deals in this editorial with the increasing interest in developing a better methodology for determining program costs of academic health centers. The current quest for adequate methodology is due to (1) the increased recognition within the centers of the need to create better systems to improve the management of the institutions, and (2) external pressures that demand program cost analyses (e.g., Congress-ordered national studies). Sprague's contention is that how we arrive at accurate program costs, i.e. methodology, is far less important than how we interpret the data which are compiled. He says cost data on an individual program, such as undergraduate medical education (where an analysis is made of a single-"product" program) leave out the matrix of talent, facilities, services and other programs (such as residency training) essential to produce the product. In addition, he points out that cost data on individual programs do not deal with the complex institution which encompasses the program. He warns against the dangers posed by legislative and administrative officials who will demand more cost information than has ever been provided before, and may make erroneous assumptions in their effort to obtain simplified answers to complex budgeting questions.

535.

Sprague, Charles C. "Undergraduate Medical Education: Elements, Objectives, Costs." Journal of Medical Education, 49 (January, 1974), 97-128.

The author, Chairman of the Association of American Medical Colleges Committee on the Financing of Medical Education, reports on the first phase of the Committee's study to determine the annual cost per medical student of the educational program leading to the M.D. degree. The Committee reviewed cost studies conducted at 12 medical schools representing a considerable degree of variation in institutional approach to undergraduate medical education. Findings show a range of costs per student from $16,000 to $26,000 in 1972 dollars. Sprague presents the bases for the allocation of costs and the elements of total education for which costs for undergraduate education were considered, stressing the complexity of identifying contributing activities and allocating their costs. The methodology of the study is described and a full summary of findings is included in this report.

536.

Stoddart, Greg L. "Effort Reporting and Cost Analysis of Medical Education." Journal of Medical Education, 48 (September, 1973), 814-23.

The "effort" or "activity" report is the technique most frequently used to collect data on which to make a cost analysis of medical education. The author states that finding an acceptable technique for allocating direct salary expenses between the patient care and education functions presents problems which have not been entirely overcome by those who developed the process of effort reporting. Stoddart offers an historical review of applications of effort reporting, comments on key methodological issues, and describes a revised methodology which features a two-step estimating process ". . . which addresses the joint-production problem and introduces enough flexibility to accommodate a multidisciplinary medical education setting."

537.

Watts, Nancy T. "Costs and Benefits of Training Health Personnel: Implications for Educational Planning in Developing Countries." Unpublished Ph.D. dissertation, University of Chicago, 1968, 284 pp.

This study examines the use of cost-benefit analysis in planning the training of modern health personnel. It identifies obstacles to accurate cost-benefit analysis in the health field, and uses the clinical apprenticeship for American physical therapy students as an illustration of how such an analysis procedure can be used. Economic as well as psychic costs and benefits are discussed from the viewpoint of the students, the university, and the affiliating clinical facility participating in the apprenticeship program.

538.

Watts, Nancy T. "Estimating the Costs of a Student Affiliation: Costs to the Clinical Facility." Clinical Education Workshop, Massachusetts Chapter of the American Physical Therapy Association, May, 1975. (Mimeographed.)

The author outlines the methods designed to help clinical facilities for physical therapy education "identify the major sources of potential costs, . . . gather a limited amount of data on these factors, and to use this in arriving at a rough estimate of net results." Procedures suggested in this article emphasize the concept of net as opposed to total costs. The procedure for estimating net costs includes the calculation of total cost to the facility followed by the subtraction of any income or savings attributable to the student program. A basis for estimates is given which includes total cost estimates of direct and indirect expenditures by the clinical facility, costs of professional time spent planning and supervising in the student program, and administrative overhead, as well as income or savings attributable to the student program. Dr. Watts notes that net cost estimations are generally a "more realistic basis for deciding whether to undertake, continue or expand an affiliation, and for determining who should pay."

539.

Wing, Paul. "Clinical Costs of Medical Education." Inquiry, 9 (December, 1972), 36-44.

The author reviews literature concerning the costs of clinical education in medicine and concludes that these studies, despite the lack of uniformity in their objectives, methods, and findings, indicate that teaching programs in hospitals do not result in additional expenditures. Relative costs vary substantially among medical specialities, and there appears to be the need for detailed cost accounting studies to "estimate the clinical costs more accurately and to clarify the surrounding issues."

Wing presents some preliminary calculations to estimate the significance of clinical costs relative to operating and capital costs in medical schools, as compared to those incurred by teaching hospitals in their educational role. He feels that the most promising avenue for further investigation is in hospital accounting procedures and systems.

Miscellaneous

MISCELLANEOUS

Selected Reports, Proceedings, Professional Studies

540.

Allen, Virginia O. Community College Nursing Education. New York: John Wiley and Sons, Inc., 1971, 173 pp.

This account of the two-year college level nursing education program at Newton Junior College in Massachusetts, describes the growth and development of the program over a six-year period. This program, which leads to an associate degree, was an experimental pilot project to determine the feasibility and desirability of regional organization and cooperation in a major health service. The project involved a public community college and five voluntary hospitals in different communities.

541.

American Physical Therapy Association. Guidelines for Physical Therapist Assistant Programs. Washington, D.C.: APTA, n.d., 12 pp.

This pamphlet provides the guidelines approved by the Board of Directors of the American Physical Therapy Association for the development of a physical therapist assistant education program. It defines the role of the physical therapist assistant, his or her function and relationship with the professional physical therapist, licensing regulations, and membership eligibility in the APTA. A full description of the design for a physical therapist assistant education program is given, with attention to standards, curriculum, administration, faculty, and criteria for clinical facilities.

542.

American Physical Therapy Association. Handbook of Information Concerning Interim Approval of an Educational Program for the Physical Therapist Assistant. Washington, D.C.: APTA, 1974, 74 pp. (Mimeographed.)

This handbook, endorsed by the APTA Board of Directors in June, 1974, contains all the basic information necessary for determining whether a physical therapist assistant educational program meets the essential requirements stipulated in "Essentials of an Interim Approval Educational Program for the Physical Therapist Assistant." It is designed as an aid to those engaged in establishing new programs and to those evaluating such programs --institutional officials, faculty,and APTA representatives serving on Review Teams. All phases of the educational program are discussed.

543.

American Physical Therapy Association. "What is Physical Therapy?" Washington, D.C.: American Physical Therapy Association, 1971, 1 p. (Mimeographed.)

This is a brief but comprehensive definition and description of the profession of physical therapy: the primary focus of a physical therapist's concerns, the knowledge and skills required of the individual physical therapist, the scope of physical therapy activities, and the relationship of physical therapy to the other health professions.

544.

American Physical Therapy Association, Committee on Basic Education. Education for Physical Therapy, 5th ed. Washington, D.C.: American Physical Therapy Association, April, 1974, 18 pp.

This pamphlet presents a well-organized overview of physical therapy education. It offers guidelines for developing new programs as well as for strengthening existing ones. The article treats all important aspects of the educational program, specifically: (1) the functions of the physical therapist and the objectives of physical therapy preparation; (2) the administrative location of a physical therapy education program; (3) the prerequisites for curriculum development; (4) the qualifications, duties, functions, and responsibilities of the academic and clinical faculty; (5) the responsibilities, functions, and concerns of the Director; (6) space requirements; (7) budgetary planning; and (8) the functions of the physical therapy program (policy, philosophy, objectives, standards, etc.).

545.

American Physical Therapy Association, Vocational Rehabilitation Administration. Implementation of the Evaluation Process in Physical Therapy Education. Proceedings of the Annual Institute, Lincoln, Neb., May 8-12, 1967. New York: American Physical Therapy Association, 1967, 104 pp.

Despite its title, this was not an institute primarily concerned with evaluation. It touches briefly on a number of topics but does not go into any subject in depth. These proceedings feature Elizabeth Greenleaf, commenting upon today's young people, the affective domain, psychological growth, and effective counseling; Geneva Johnson, on the planning and organization of learning experiences; and Anne Pascasio, on objectives, evaluation, and implementation.

546.

American Public Health Association, Committee on Professional Education. "Educational Qualifications of Physical Therapists in Public Health Agencies." American Journal of Public Health, 56 (February, 1966), 322-27.

This article addresses the range of responsibilities which confronts the public health physical therapist and considers the requisite educational qualifications. The public health physical therapist must be able to handle a wide variety of activities and serve in a number of different types of positions, at more than one level of responsibility. Descriptions of the general scope of the field as well as the specific functions of these physical therapy roles are given. A detailed discussion of educational requirements, treating the knowledge, skills and experience essential for each position is offered. Recommendations for designing public health physical therapy education are included.

547.

Association for Supervision and Curriculum Development. Supervision: Perspectives and Propositions. Edited by William H. Lucio. Washington, D.C.: Association for Supervision and Curriculum Development, 1967, 53 pp.

This book examines supervisory functions, instructional supervisory behavior, and supervision as teaching, and makes recommendations for supervisory programs. Intending to offer the reader material for developing his own conception of supervision, Lucio points out the following aspects of supervision: (1) the goal-setting and goal-accomplishing function, (2) the instructional function, (3) the team approach to supervisory tasks, and (4) the view of supervision as a function varying according to the unique situation.

548.

Babbie, Earl R. Survey Research Methods. Belmont, Calif.: Wadsworth Publishing Company, Inc., 1973, 383 pp.

This is a comprehensive handbook on methods for survey research. Aspects treated include discussions on the scientific context of survey research, the design and analysis of survey research, and the social and scientific perspective of survey research.

549.

Becker, Howard S.; Geer, Blanche; Hughes, Everett C.; and Strauss, Anselm L. Boys in White: Student Culture in Medical School. Chicago, Ill.: University of Chicago Press, 1961, 456 pp.

This eminently readable and informative book is a sociological study of the University of Kansas Medical School. It focuses on student culture, and specifically, on the student perspectives which determine the level and direction of student effort. The study is presented in four parts: (1) background and method; (2) student culture in the preclinical portion of medical school, particularly the freshman year; (3) student culture in the clinical years; and (4) student perspectives on the future, especially their vocational futures. The major method of investigation was participant observation. The authors present their findings in great detail, including many anecdotes verbatim, and they discuss exhaustively the evidence for and against their conclusions.

Evidence is presented for the existence of three perspectives which make up student culture in the clinical years and exert a major influence on student attitudes and behavior during that time. Two of these perspectives, the "medical responsibility" perspective and the "clinical experience" perspective, place a high premium on the opportunity to participate in apprentice activity which gives the student a chance to gain clinical experience (which he may be ridiculed for lacking) and to exercise the sort of life and death responsibility which is seen as the basic key action of the practicing physician. Students judge the worth of any activity according to the extent to which it provides such opportunities, and are so united in their acceptance of these perspectives that they tend to reject such less "practical" directions for their effort as curiosity and the acquisition of knowledge for its own sake. The "academic" perspective recognizes that the faculty can prevent a student from finishing school or make life difficult for him even to the extent of publicly humiliating or degrading him. This perspective results in docile and placatory behavior on the part of the student.

550.

Bohannan, H. M.; Rovin, Sheldon; Packer, Merrill W.; and Costich, Emmett R. "The Flexible Dental Curriculum." Journal of the American Dental Association, 84 (January, 1972), 112-24.

The authors identify and review some of the external forces impelling the dental profession to change its academic approach.

They propose a flexible curriculum which allows students to proceed through a basic prescribed course of study at their own rate, acknowledging that mastery of required skills is achieved at varying rates. They urge that curriculum changes be made in (1) the basic sciences--to provide them in the predental curriculum and exempt students in dental school who can pass qualifying exams; (2) the clinical sciences--to de-emphasize restorative and technical training and shift emphasis to preventive procedures and diagnostic techniques (the authors feel that future dental practitioners will learn to use auxiliary personnel for many procedures); (3) the social sciences--to prepare students to deal with current concerns to provide dental health care for more people, and to meet the demands of expanding government programs. Specific guidelines for implementing curriculum changes are offered.

551.

Brollier, Chestina. "Personality Characteristics of Three Allied Health Professional Groups." American Journal of Occupational Therapy, 24 (October, 1970), 500-05.

Ms. Brollier presents some comparisons made in a study of personality differences in the health professional groups of physical therapy, occupational therapy and social work. Social workers and psychiatric occupational therapists scored significantly higher in their need for autonomy, suggesting that physical therapists and occupational therapists who treat physical dysfunctions are better fitted by personality to a more structured working environment. In achievement goals and several other categories they did not differ significantly. Social workers and psychiatric occupational therapists, along with exhibiting a need for autonomy, did appear to have less deferential attitudes toward authority, and more dominating personalities, two other characteristics measured in this study.

552.

Council of Physical Therapy School Directors. Guidelines for Developing an Educational Program of Excellence in Physical Therapy: Curriculum. Proceedings of the Annual Institute. Pittsburgh, Pa., November 1-5, 1965, 85 pp.

These proceedings deal with physical therapy education, including discussions on the selection of the Physical Therapy School Director and on the skills and attitudes to be taught. Of special interest are George Fahey's article on the "Teaching of Attitudes" and the study entitled "Reports: Attitudes to be Considered in Planning an Educational Program in Physical Therapy." Fahey offers generalizations on teaching attitudes and discusses certain problems that stem from preconceived attitudes. The "Reports" lists traits of desirable professional attitudes, developed by four groups during this Institute.

553.

Council of Physical Therapy School Directors. Response of Professional Education to Social Change. Proceedings of the Annual Institute. Cleveland, Ohio, October 23-27, 1966, 56 pp.

During the course of this Institute, the CPTSD examined the response of professional education in the health fields to social change. The program was developed in such a way as to enable the participants to recognize these factors and to force them to take a critical look at their educational programs, themselves as educators, and at their role and function as physical therapists. Of particular interest are the "group reports" in which the members of the Institute gathered into small groups and formulated more specific recommendations in the interest of defining and fulfilling these stated goals.

554.

Council of Physical Therapy School Directors. Toward Excellence in Physical Therapy Education. Edited by Ruby Decker. Proceedings of the Annual Institute. Bloomington, Ind., October 26-30, 1964, 169 pp.

This Institute included lectures, reports, and panel discussions which define excellence in physical therapy education, as well as suggest how it can be attained. John Caughey's lecture stresses that excellence in education cannot be defined, as it involves intellectual, social, and emotional processes within an individual which are manifested by his increased professional growth--his acceptance of professional responsibility which grows with the development of maturity, self-discipline, and innate standards. Emily Holmquist describes how accreditation is used in nursing education for judging excellence, and A. N. Taylor discusses this same topic as it pertains to medical education. Susanne Hirt offers a summary of the objectives of a curriculum leading to excellence in education, and notes that these objectives relate to the personal growth of the student (intellectually, socially, culturally, and ethically) as well as to his professional growth in the areas of knowledge, skill and attitudes. Sarah Rogers discusses the process of evaluation of education by the survey visit, and Eunice Roberts stresses the difference between training and education, praising the previous speakers for their emphasis on the importance of flexibility. This Institute also included reports on the education, training, and use of non-professional personnel, including a CPTSD policy statement concerning this issue.

555.

Englehart, Helen V. "An Investigation of the Relationship Between College Grades and On-the-Job Performance During Training of Occupational Therapy Students." American Journal of Occupational Therapy, 11 (Part 2, March-April, 1957), 97-107.

The subjects for this study were 104 graduates of the Occupational Therapy Program at San Jose State College. The article reports on a study to investigate the predictive value of performance: (1) in required college courses for performance on-the-job during clinical training, (2) in required courses for the national registration examination, and (3) on-the-job during clinical training for the national registration examination. No significant correlations were found in any of the three areas of investigation. The author provides a summary of how the variables affected the results and what can be conjectured from the findings.

556.

Jacobs, Richard M., and Logan, Nelson S. "Continuous Progress Education: I. New Concept of Flexible Dental Curriculum." Journal of Dental Education, 36 (November, 1972), 29-31.

These authors provide a concept for a more flexible dental curriculum designed to meet three broad objectives: to increase professional manpower production in dental colleges; to acknowledge and reward student behaviors which indicate early readiness of students to perform professionally; and to lower the resource cost and increase the educational worth of dental school operations by means of the first two of these objectives. The curriculum they espouse eliminates the standard four-year dental education program, as well as semester scheduling and conventional grading. A student works at his own pace to gain behavioral objectives, and is motivated to achieve by the opportunity to enter practice earlier, saving his money and that of the school. The flexible curriculum allows him to take a variable number of courses at a given time, lets him complete a given course in a variable length of time, and offers him a flexible academic program from which to choose diverse advanced electives.

557.

Keyes, Joseph A. "Students' Rights to School Records--The Buckley Amendment." HPEER (Health Professions Educators Exchange of Research), 4 (December, 1974), pp. 1 and 3.

This brief discussion of the Buckley Amendment to the Family Rights and Privacy Act of 1974 suggests that Congress may amend the statute "to preserve from disclosure information obtained prior to a certain date under a promise of confidentiality, and to permit students the option of voluntarily waiving their rights to see letters of evaluation." Keyes points out that the Act as it now stands applies to all information currently in the school's files and allows no waivers or reservations. He also reminds the reader that requests to see the files must be responded to within 45 days; that the student may challenge the accuracy of the information and seek correction of the files, which the institution may voluntarily cleanse of inappropriate information; that truth is a complete defense in any libel suit; that there are specific limits on the persons (other than the student himself) who may have access to the records and under what circumstances; and that students must be notified of their rights under the Act.

558.

Kinney, Thomas D., Chairman of the AAMC Ad Hoc Committee on Graduate Medical Education. "Implications of Academic Medical Centers Taking Responsibility for Graduate Medical Education." Journal of Medical Education, 47 (February, 1972), 77-84.

The author reports on the study (by the Association of American Medical Colleges Ad Hoc Committee on Graduate Medical Education) which addressed the subject of academic medical centers assuming total responsibility for all medical education, which would directly affect the present system of education of clinical graduate students (interns, residents and clinical fellows in all departments) who have traditionally been under the control and supervision of several fragmented settings, i.e. hospitals, specialty boards, service chiefs, and others. A consolidated approach as described in this article would mean that the faculty of the medical center would hold full responsibility for the entire medical education process from establishing goals and policies to completing the program--encompassing both pre-doctoral and post-doctoral levels. The chief advantage to this unification would be the achieving of an administrative structure able to produce continuity of purpose and program.

559.

May, Bella J. "Identification of Basic Structures and Development of a Continuous Progress Curriculum for Physical Therapy Assistants." Unpublished Ed.D. dissertation, University of Miami, 1970, 215 pp.

This study, which developed a curriculum for physical therapy assistants, encouraged the use of a continuous progress design to assure program flexibility, the presentation of subject matter in an integrated fashion, and the application of new concepts of curricular and learning theories. The author recommends that clinical practice time be scheduled throughout the program, noting that providing clinical experiences concurrently with didactic education gives the curriculum greater meaning. May also suggests that the effective use of instructional methods will help to solve the problem of faculty shortages as well as improve learning experiences.

560.

Mayhew, Lewis B. Changing Practice in Education for the Professions. SREB Research Monograph No. 17. Atlanta, Ga.: Southern Regional Education Board, 1971, 90 pp.

Surveying the major professional fields, the author finds them all in varying degrees of discontent, reappraisal and reform. They are all tackling the same problems: theory versus skills, specialization versus broad bases, whether to prepare candidates for their first jobs or to give them a broad foundation for continued development, the thrust toward subprofessions and the relations between the parent profession and among the offspring, content versus process, whether the professional schools should seek to bring about innovations in the professions, how to select the faculty, the relations between the professional school and the university, innovative teaching methods (such as earlier and more field experience), the use of the new media, how much to stress international aspects of the profession, and how much attention to pay to values and ethics and professional identity and how to achieve the desired attitudes. "The last element of curricular reform--continuing education--has developed from an impressive set of premises but has turned out to be a puny effort on the part of the professional field." Cooperation between the profession (whatever it may be) and the social and behavioral sciences seems so necessary and of such mutual benefit that, despite difficulties such as the nature of the cooperative relationships, differing technical language and the applicability of research findings from one field to another, ways of cooperation must be found. More inter-disciplinary contacts, field experience and competent supervisors are needed. Program content must have personal, social, educational and economic relevance. Behavioral objectives of education must be specified and outcomes evaluated. More attention must be paid to retraining and continuing education. (Fostering the Growing Need to Learn)

561.

McCauley, Mary. "How Individual Differences Affect Health Care Teams." Health Team News, 1 (April 1, 1975), 4 pp.

This article describes a study of the composition and performance of health care teams with regard to the psychological types of personalities among the individual members. Predicated on the assumption that "Since health care teams have a complex task, they need the talents of different types of people . . .," the study defined several personality types for inclusion on the hypothetical teams: introverts, extroverts, sensing types, intuitive types, thinking types, feeling types, judging types, and perceptive types. Using these categories of personality types, predictions were made on how the different personalities in a health team affect the team's leadership, cooperation, understanding, development, and decision making.

562.

Michels, Eugene. "On Not Turning Out Physical Therapists: A Critical Issue for Education in Physical Therapy." Physical Therapy, 52 (December, 1972), 1292-96.

Michels' concern is the interpretation of the aims of physical therapy education. He wants educators to distinguish between offering education for physical therapy and education in physical therapy. He supports the latter concept, believing that physical therapy should be an academic discipline in its own right, but he suggests that the metamorphosis of physical therapy educational programs from clinics to universities has yet to be completely realized. Michels deplores the tendency of educators to "turn out" physical therapists. He points out that the student who has acquired adequate education in physical therapy can benefit more readily from the clinical experience.

563.

Moore, Margaret L. "Legal Status of Students of Health Sciences in Clinical Education." Physical Therapy, 49 (June, 1969), 573-81.

This article details the legal status of students and educators who spend part of their time in the clinical setting. Of interest to these students and teachers are liability insurance, workmen's compensation insurance, and contracts. However, protection against tort liability is best assured by the quality of the total education process, i.e. wise selection and retention of highly qualified students, soundness of education offered, along with wise selection and development of clinical affiliation centers and of associated professional centers.

564.

Mortimer, Kenneth P. Accountability in Higher Education. Washington, D.C.: American Association for Higher Education, 1972, 58 pp.

This report is an excellent review of the literature on accountability in higher education. It considers explicitly the major uses of the term "accountability," differentiating "accountability" from "evaluation" and "responsibility," and defining managerial accountability. The author discusses external pressures for more accountability (pressures from society, government, the courts, statewide coordinating boards, and various agencies), and analyzes the difficulties of assessing internal accountability. Probable trends for the 1970s are summarized at the end of the report. The author sees future directions in accountability as being towards: equal access to education for women and minority groups; quasi-public utility status for higher education; more concern about management and attempts to relate managerial efficiency to educational effectiveness; further codification of the internal decision-making process; more emphasis on behavioral accountability (the relation of dollars spent to student accomplishment); more importance being attached to management and educational technologies; and more centralization of management functions, with decentralization of academic functions.

565.

O'Brien, William M., and Bagby, Susan. "An Attempt to Increase the Number of Applicants From Rural Areas." Report on National Fund for Medical Education, University of Virginia School of Medicine, 1974, 19 pp. (Mimeographed.)

This report points up the need for early counseling and encouragement of rural students interested in health careers. It suggests that health educators grappling with the problem of filling manpower needs in rural areas must look below the college level to seek out and cultivate the potential of students at the secondary level. In a survey of 3,635 rural high school seniors in a poor rural area (in the class of 1974) it was found that 16 percent of the white students and 2.6 percent of the black students had the potential for applying to medical school. However, a survey of guidance counselors revealed that little had been done to interest students in medicine or other health sciences as a career. A survey of the students themselves showed that most (all but 18 percent) had dropped any consideration of medical careers, because of concerns about financing, length of training, and/or discouragement over racism or sexism. The authors suggest a program to interest more rural students in medicine, and they outline further study of the population they studied.

566.

Pascasio, Anne. "Education for the Physical Therapist of the Future." Unpublished Ph.D. dissertation, University of Pittsburgh, 1966, Dissertation Abstracts 27, 3348-A.

The purpose of this study was to determine the professional competencies necessary to future physical therapists, upon which a curriculum could be designed. Among the desired competencies were clinical proficiency in patient care, skill in teaching, administration, as well as interpersonal relationships and continued professional growth. Besides formulating determinants for the development of a curriculum based on these competencies, the author recommends that research be continued on learning experiences and on the most useful types of continuing education for physical therapy instructors.

567.

Travers, Robert M. W., ed. Second Handbook of Research on Teaching; A Project of the American Educational Research Association. Chicago, Ill.: Rand McNally--College Publishing Company, 1973, 1400 pp.

This volume is not merely an update of the Gage Handbook. It tries not only to review the available knowledge that has some implications for teaching but also to function as a handbook of ideas being explored. Narrower topics are covered than in the first Handbook. The authors here have reviewed the research, or referred the reader to already published reviews, and then have proceeded to discuss the research issues. Deploring the vast quantity of poorly conceived research on teaching, these authors consider how research should be undertaken if it is to be productive. This emphasis on what is wrong with educational research derives from the perceived general level of inadequacy of the research undertaken in the past, and the difficulty of finding significant research to report. The topics covered include "The Assessment of Teacher Competence," "The Teaching of Affective Responses," "Research on Teacher Education," and "Research on Teaching in Higher Education."

568.

U.S. Department of Health, Education, and Welfare, Health Resources Administration, Bureau of Health Resources Development, Public Health Service. Trends and Career Changes of College Students in the Health Fields; A Summary Report on a Study Conducted by the American Council on Education Policy Analysis Service. Washington, D.C.: Government Printing Office, 1974. (DHEW Publication No. (HRA) 76-54.)

This report contains a full description of the three phases of an American Council on Education study which consisted of (1) an analysis of career changes of college students in health fields; (2) an analysis of the historical trends in health career choices of college freshmen and their characteristics; and (3) an analysis and evaluation of the validity of health career choices made by undergraduate students to determine to what extent their later career decisions correlated with their earlier stated choices. In addition, the report also features profiles of each of the five most popular career occupational groups, as compared with health career applicants as a whole.

569.

U.S. Department of Health, Education, and Welfare, Public Health Service, National Center for Health Statistics. Health Resources Statistics. Washington, D.C.: Government Printing Office, 1969. (Published annually.)

This series of documents published by the National Center for Health Statistics provides current statistics on a wide range of health areas (manpower and facilities) as baseline data for the evaluation, planning, and administration of health programs. Additional detail is obtainable by referring to the sources and published and unpublished materials cited in the individual chapters.

570.

Weil, Thomas P., and Parrish, Henry. "Development of a Coordinated Approach for the Training of Allied Health Personnel." Journal of Medical Education, 42, Part I (July, 1967), 651-59.

The authors, exploring the possibilities for developing a core curriculum for allied health personnel, found that a survey of eleven allied medical programs' accreditation standards revealed a significant similarity in the basic science, sociology, and psychology requirements. They cite the advantages of coordinating a major portion of the first two years of all allied health programs, particularly emphasizing the opportunity this would afford to indoctrinate students in the interdisciplinary health team approach. Other advantages, as well as program suggestions, are discussed.

571.

Worthingham, Catherine. "Curriculum Patterns for Basic Physical Therapy Education." Physical Therapy, 48 (January, 1968), 7-20.

This article reports on a comparison of the minimum credits in the subject areas required in 1965-66 for completion of the baccalaureate degree in physical therapy with the same subject areas in six selected undergraduate fields. The other fields studied were the biological sciences, physical sciences and mathematics, humanities, social sciences, agriculture, and engineering.

572.

Worthingham, Catherine. "The Environment for Basic Physical Therapy Education, 1965-1966: The Academic or Theoretical Phase." Physical Therapy, 48 (September, 1968), 935-62.

This report is the first part of Worthin[illegible] comprehensive study of physical therapy education. It encompasses and describes a broad array of statistical data obtained by a questionnaire survey of directors of physical therapy education programs in 42 different schools. Subject areas are broken down into: (1) background information about the type of school and program (certificate or degree); (2) administrative structure and relationship to other schools; (3) space and equipment resources; (4) enrollment and ratio to population; (5) teaching responsibility (natural sciences, physical therapy, clinical medicine and surgery); (6) other types of health professional education programs in the institutions.

A second area of inquiry produced data obtained from questionnaires returned by 252 faculty members who answered a group of questions related to their professional status and their relationship to the physical therapy educational program.

573.

Worthingham, Catherine. "The 1961 and 1965 Graduates of the Physical Therapy Schools." Physical Therapy, 49 (May, 1969), 476-99.

This article, the fourth section of the Study of Basic Physical Therapy Education, deals with information obtained in a survey of physical therapists graduated in the calendar years 1961 and 1965. Eighty-one percent (81%) of the 1961 graduates and 80 percent of the 1965 graduates participated in the study, which was undertaken to produce facts about students' employment situations, educational preparation, objectives for further study, and apparent deficiencies in basic physical therapy education.

These data are described for all respondents, both employed and unemployed.

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